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Workplace Smoking Policies and Public Reaction in Alberta: An Analysis of the 1990 Alberta Survey

Canada

Workplace Smoking Policies and Public Reaction in Alberta: An Analysis of the 1990 Alberta Survey *

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Preface

This report is a contribution to Canada's National Strategy to Reduce Tobacco Use. In May 1985, the federal and provincial ministers of health from across Canada agreed that the movement to reduce tobacco use could succeed only with a comprehensive approach. Eight national health organizations also pledged their support. The result was the National Strategy to Reduce Tobacco Use in Canada, a collaborative and comprehensive approach to reducing tobacco use.

The National Strategy is based on the belief that the impact of efforts to reduce tobacco use will be greater if all levels of government and non-government agencies work together. It is a framework within which everyone can work together towards three common goals:

1. **Protection** of the health and rights of non-smokers
2. **Prevention** to help non-smokers to remain smoke-free
3. **Cessation** to encourage and help those who want to quit smoking to do so.

On a regular basis, the partners in the National Strategy agree on priorities for action. One of the main priorities in the current period has been the issue of workplace smoking policies. The present report was commissioned with the objective of providing information to help in introducing such policies. Based on a survey of 1,200 Albertans, the report considers what groups are presently covered by workplace smoking restrictions; the degree of support for workplace smoking policies among workers in various subgroups; and peoples' opinions about smoking restrictions in a variety of public places.

This report goes beyond attitudes and opinions to consider behavioral response, i.e., the extent to which smoking restrictions are actually observed. It also presents information designed to help in introducing smoking restrictions, by considering the reasons that smokers recognize as valid arguments for quitting. As such, the report provides new information on the effectiveness of workplace smoking policies, and on the factors that might facilitate their implementation. It is hoped that this information will be useful to employers, unions, workplace health committees, and various levels of government in their efforts to reduce smoking in the workplace.

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Executive Summary

1. The proportion of Canadian adults who smoke has been declining steadily for the past two decades, but variations in smoking behaviour across population sub-groups remain.

2. Workplace smoking policies (total bans or restricted smoking areas) have become more common in the past decade, particularly in the last half of the 1980s. New federal, provincial and, particularly, municipal legislation has had some impact on this trend, but a society-wide value shift regarding smoking has also played a part.

3. Previous research has shown that attempts to restrict smoking in public and workplaces have generally been received favourably, even among smokers, although they are somewhat less likely to support "no smoking" policies.

4. Different population sub-groups exhibit different levels of support for such policies, but we know little about urban-rural differences. Previous research has also focussed primarily on attitudinal responses while ignoring behavioural responses to "no smoking" policies and to violations of such policies.

5. A 1990 province-wide random sample survey of 1245 Alberta adults allows us to re-address some of these questions (since most previous studies were completed some years ago) and to examine those ignored by previous researchers. While Alberta is unique in some ways, many of the findings from this study may also be generalized to the country as a whole.

6. Less than one-third (29.6%) of adult Albertans are regular cigarette smokers. Differences across population sub-groups are similar to those observed in other studies. Men are somewhat more likely to be daily smokers, while the proportion declines across age groups. There is some evidence of higher rates of regular smoking in non-urban settings, particularly among younger males. Better educated Albertans, and those in managerial and professional occupations, are less likely to be smokers.

7. Almost two-thirds of employed Albertans (64.4%) are protected by some kind of smoking policy, including one-quarter who work in an organization where smoking is completely banned. Over half (57.5%) report that smoking is not permitted in their immediate work area. These results suggest considerable movement in the last few years towards broader coverage of Canadian workers by workplace smoking policies.

8. Young male workers are least likely to be employed in an organization with some kind of "no smoking" policy, primarily because young men are over-represented in the blue-collar occupations where smoking policies are least likely to have been implemented.

9. Workplaces in towns, villages, and rural areas are less likely to have some form of "no smoking" policy. Among the larger urban centres, Edmonton appears to have moved furthest towards eliminating

smoking in the workplace, perhaps because of the larger number of government offices in that city. However, Calgary and other Alberta cities are not that far behind in this trend towards smoke-free workplaces.

10. Almost four out of five (78.9%) of the employed Albertans who reported some kind of smoking policy in their workplace stated that they agreed with this policy. While smokers are less likely to support such policies, a majority do agree with the smoking restrictions in their workplace. In the past, both non-smokers and smokers tended to favour smoking restrictions over total bans. Today, this pattern appears to have been reversed for non-smokers.

11. Like previous studies, this 1990 survey showed the less educated to be less supportive of "no smoking" policies. Unlike previous studies, women and men were equally likely to be in agreement with such policies. Albertans living in and outside of the major urban centres were equally likely to state that they agreed with a "no smoking" policy, if one existed in their workplace.

12. One-third of the total sample had observed someone smoking in a restricted area during the previous month. Many of these individuals stated that this had occurred several times. These smoking policy infractions were observed in a wide range of locations, including restaurants, stores, office buildings, malls, and workplaces.

13. Only 45 of the 430 current smokers in the study (10.5%) admitted to smoking in a restricted area within the previous month. These results suggest that the relatively frequent observations of smoking policy infractions may be traced to a small minority of smokers.

14. Over half (55.6%) of those who had observed smoking policy violations said that they had been bothered by the smoker's behaviour. Regular smokers were less likely to state that they had been bothered, while women were more likely than men to agree that they had been bothered. Rural and urban residents were equally likely to be bothered by someone smoking in a restricted area.

15. Less than one in five employed sample members (17.3%) stated that, in the past year, they had asked someone in their workplace to stop smoking. However, a significant number of these individuals had done so many times. It is apparent that a small but vocal minority of workers frequently ask the small number of smokers who do violate workplace "no smoking" policies to comply with these policies.

16. A large majority (77.3%) of Albertans believe that second-hand smoke can be harmful. An even larger majority (83.6%) would favour stricter legislation restricting the sale of tobacco to minors. However, only half of the sample agreed that more restrictions on smoking would reduce tobacco use, that stores selling tobacco should be licensed, and that tobacco taxes should be raised to cut down on smoking. Urban-rural differences in response to these questions were of little significance.

17. Personal health concerns were seen to be an important reason for quitting smoking by 78% of current smokers.A majority (60.6%) said that the cost of cigarettes would be an important reason, while one-half (50.5%) indicated that the effect of their smoking on others would be an important reason for quitting. The different patterns of response to these questions across sub-groups of smokers can be of assistance in devising more effective ways of implementing new workplace smoking policies.

18. These research findings can be summarized into four basic conclusions that can probably be generalized beyond Alberta to the rest of the country:

    a) Workplace smoking policies have become much more common, with a substantial majority of workers protected by some type of policy.

    b) As workplace smoking policies have become more common, the strong support for them which was observed in earlier studies has remained. In general, the principle that the rights of non-smokers must be protected appears to have become the norm.

    c) A small minority of workers continue to violate "no smoking" policies, but they face a reasonably high chance of being asked to comply by another small minority of co-workers.

    d) Although residents of larger urban centres are somewhat less likely to smoke, and while workplace smoking policies are somewhat less common in rural and small town settings, rural and urban residents appear to be equally receptive to "no smoking" policies.

Introduction

One of the more significant social changes observed in North America in the past decade has been in public reaction against smoking. "Smoking is no longer viewed as that inconspicuous activity which helps to define the patterns of everyday life" (Rea, 1987:16). Instead, in many social circles and in many workplaces, it has come to be seen as unacceptable behaviour. The growing opposition to smoking in public and the workplace reflects the no-longer disputed research evidence of health risks associated with involuntary smoke exposure (resulting from second-hand or sidestream smoke).

At the individual level, fewer people are smoking. As for those who continue to smoke, informal sanctions are beginning to have a significant effect on their behaviour. At the organizational level, non-smoking policies have been introduced by many employers. And at a community and societal level, legislation limiting or banning smoking in specified public places and workplaces has been implemented by the federal, several provincial, and many municipal governments.

Legislators have generally been more willing to restrict smoking in public places (and government workplaces), no doubt thinking that employers would resist such intrusions into private sector workplaces. Unfortunately, while involuntary exposure to tobacco smoke can occur in both public places and workplaces, in the latter individuals often have much less choice about avoiding such exposure (Abernathy et al., 1989). Hence, the need for workplace smoking restrictions may be even greater than the need for restrictions on tobacco use in public places.

While smoking restrictions in public places were implemented earlier, the pressure to limit workplace smoking has increased significantly in recent years. Workplace smoking policies introduced voluntarily by private sector employers, or because of federal, provincial, or municipal legislation governing specified workplaces, have become more common. A 1986 national survey showed that 40% of the Canadian work force had some form of designated non-smoking area (either a restricted area or a total ban on smoking) at their place of employment (Millar and Bisch, 1989), suggesting that restrictions of workplace smoking might soon become the norm. However, this is not the case for outright bans on workplace smoking. The 1985 Canadian Health Promotion Survey (Health and Welfare Canada, 1988:19) revealed that less than 10% of employed Canadians were working in a setting where smoking had been completely banned, rather than merely restricted.

Much of the available Canadian information on smoking-related topics comes from surveys done in the early and mid-1980s. Hence, an up-to-date look at smoking behaviour and the existence of workplace smoking policies should be useful, since a great deal of smoking-related legislation has been passed in the past half decade. It is true, of course, that generalizations from a single-province survey to the Canadian population should be made cautiously. Nevertheless, there is merit in re-examining some of the research questions addressed in studies completed some years ago. A review of these studies also reveals that possible urban-rural differences in the existence of workplace smoking policies, and in reactions

to them, have not been considered. Consequently, this study deliberately builds rural-urban comparisons into all of the data analyses.

This report begins with an overview of smoking behaviour in Canada. This is followed by a summary of legislation affecting smoking in Canadian public places and workplaces, and a review of research on reactions to "no smoking" policies. The core of the report is a detailed analysis of data collected in the 1990 Alberta Survey, a random sample public opinion survey of 1245 adult residents of the province. The smoking behaviour of different sub-groups in the Alberta population is examined first. The focus then shifts to the existence of workplace smoking policies. Again, sub-groups of Albertans most likely to be working in organizations with a "no smoking" policy are highlighted. Following the lead of the research literature, variations in support for such workplace smoking restrictions (by age, gender, current smoking behaviour, education, occupation, and rural-urban residence) are then discussed.

This report then goes beyond existing studies of attitudes and opinions by describing behavioural responses to public and workplace "no smoking" polices (who violates such smoking restrictions? how often? where?). In addition, the following analyses examine how Albertans react to such violations of smoking restrictions. Differences across population sub-groups are again considered.

The last two sets of data analyses are not related as directly to the general theme of workplace smoking policies. Albertans' opinions about the health effects of second-hand smoke, and about legislation intended to restrict tobacco use, are scrutinized. Such opinions can obviously influence reactions to the implementation of "no smoking" policies. They must also be taken into account by legislators attempting to restrict the sale and use of tobacco. The report concludes by comparing the importance which smokers attach to different reasons for (possibly) quitting smoking. These findings allow some speculation about better ways in which workplace "no smoking" policies might be implemented.

Smoking Behaviour In Canada

The proportion of adult Canadians who smoke cigarettes has been declining steadily for the past two decades. In the mid-1960s, approximately 50% of the Canadian population over the age of 15 smoked cigarettes. By the mid-1980s, this figure had dropped to about 34% (Health and Welfare Canada, 1988). Most of these individuals were regular cigarette smokers (30.4%), while a small number (4.3%) were occasional smokers. About one in five (21%) adult Canadians were former cigarette smokers (McKie, 1987: 21; Statistics Canada, 1987:25).

A 1986 national survey showed a slightly lower proportion (28.2%) of regular cigarette smokers among those 15 and older (Health and Welfare Canada, 1988). This survey also clearly highlighted the curvilinear relationship between age and regular cigarette smoking. The highest rate (33.4%) was exhibited by those age 25 to 44. Canadians age 20 to 24 were almost as likely to be regular smokers (31.7%) as were those age 45 to 64 (29.4%). Seniors were least likely to be regular smokers (14.4%), followed by teenagers (17.6%). Considering all ages, men were more likely than women to be regular cigarette smokers (30.8% versus 25.8%). However, this pattern was reversed among young (15 to 24) Canadians, where females were slightly more likely to report regular use of cigarettes (Health and Welfare Canada, 1988).[1]

There are also cultural differences in smoking behaviour. Such differences are exhibited most clearly by cross-national comparisons (Wilkinson, 1986:122), but are also evident within Canada. For example, the percentage of cigarette smokers varies from province to province, with the highest proportion in Quebec and the lowest in British Columbia (Statistics Canada, 1987:26). The Alberta rate was marginally higher than the national rate in 1986, with 29.1% of Albertans reporting that they regularly smoked cigarettes (Health and Welfare Canada, 1988). One might also expect some rural-urban differences in smoking behaviour, but few studies have focused on this source of variation.

Social status differences are also reflected in smoking rates.[2] For example, better educated Canadians are less likely to smoke. The proportion of smokers also varies by occupation with those in professional occupations being least likely to smoke cigarettes (Health and Welfare Canada, 1988). Millar and Bisch (1989) indicate that 44% of Canadians in *blue-collar* transportation, mining, and construction occupations are smokers. Similar findings are reported by Sterling and Weinkam (1990) who suggest that smoking is much more prevalent within occupational groups that also tend to be exposed to other workplace health and safety hazards.

1 Essentially the same patterns of smoking behaviour by age and sex were recorded in the 1985 national General Social Survey (Statistics Canada, 1987: 26).

2 See Goldstein (1991) for an interesting discussion of myths and realities regarding social class differences in smoking behaviour and attitudes.

Non-smoking Legislation and Workplace Smoking Policies in Canada

Federal Legislation and Policies

Over the past decade and throughout the country, new legislation restricting smoking in public and workplaces has been implemented, and specific workplace smoking policies have been developed. Some, but not all, of the earlier initiatives began with the federal government. For example, in February, 1985, the Canadian Treasury Board introduced voluntary guidelines on smoking by federal employees. In October, 1986, two Private Member's Bills intended to limit smoking in federal government buildings were introduced in the House of Commons. A year later, smoking was restricted to designated areas in federal government workplaces. In 1987, Transport Canada banned smoking on all Canadian airline flights of two hours or less (this ban now extends to all Canadian flights). A complete ban on smoking on Parliament Hill was implemented in 1989.

The most dramatic changes introduced by the federal government were the result of two wide-ranging and contentious pieces of legislation (Baker, 1989). The passage in 1988 of the *Tobacco Products Control Act* now severely limits advertising of tobacco products in Canada. The *Non-Smokers Health Act*, passed in 1989, guaranteed employees within federal jurisdiction (civil servants across the country, employees of crown corporations, and employees of federally regulated industries) a smoke-free work environment, placing it among the most progressive pieces of smoking legislation in the world (Kyle, 1990).

The introduction of such laws reflects an increased awareness of tobacco as an addictive substance and a major public health concern (McElroy, 1990). It also signals a change in the attitudes of legislators who, a decade or two ago, would have been unwilling to propose legislation such as the *Non-Smokers Health Act* for fear of offending smokers.

Provincial Legislation and Policies

Six provinces in Canada (Ontario, Quebec, Newfoundland, New Brunswick, Prince Edward Island and Manitoba) as well as the Northwest Territories restrict smoking in provincial workplaces, that is, they require government workplaces to have a formal smoking policy. In Alberta, smoking policies are optional within government workplaces. A recent survey showed 87.5% of provincial departments had introduced some kind of smoking policy (Calgary Health Services, 1988:18). Two provinces, Ontario and Quebec, now have specific laws which restrict the use of tobacco in designated public and private sector workplaces. Quebec passed Bill 84 in January, 1987 and Ontario followed with its somewhat more restrictive and wide-ranging Bill 194 in 1989. Similar legislation was being proposed by opposition members in the B.C. legislature in 1990. But while most provinces have not introduced wide-ranging legislation affecting smoking in public and workplaces, most do allow municipalities to pass local bylaws

addressing public health concerns. Consequently, in the past decade significantly more smoking legislation in Canada has emerged at the municipal level.

Municipal Legislation in Canada

Although a few Ontario municipalities and one in New Brunswick acted some years earlier, 1986 was the year when a large number of municipal governments began introducing by-laws which either restricted or prohibited smoking in various public and workplaces (Baker, 1989). By late 1988, a survey by Calgary Health Services (1988) revealed 129 Canadian municipalities reporting some type of smoking by-law, most of which had been in place for only a few years. Newfoundland, the Northwest Territories, and the Yukon reported no municipal legislation restricting or banning smoking. By 1990, roughly 150 Canadian municipalities had enacted by-laws controlling the use of tobacco in public (Collishaw et al., 1990).

In almost all of these cases, smoking was restricted in retail stores. Frequently restaurants were also targetted, but typically they were only required to provide a non-smoking area. But while municipal by-laws limiting smoking in public places are now quite common, only a few of these bylaws also require (some) employers to implement smoking restrictions for their employees (Collishaw et al., 1990:4). As of 1988, twenty-two Canadian municipalities had a general workplace section in their by-laws. Eighteen of these municipalities were located in British Columbia (including Vancouver and Victoria), three were in Alberta, and one was in Toronto, Ontario (Calgary Health Services, 1988: 49).

A quick summary, moving east to west across the country, showed three municipalities in Nova Scotia reporting smoking by-laws. The first was established in 1980 (Halifax), the most recent in 1986 (Sydney). The municipality of Charlottetown in Prince Edward Island implemented its first smoking by-law in 1987. However, the municipality of Fredericton in New Brunswick had brought in its smoking by-law much earlier (1975).

Fifteen Quebec municipalities had smoking by-laws by late 1988. The first was established in 1977, but the majority (10 of the 15) were not enacted until 1988. Ontario reported a total of sixty-one municipalities with smoking by-laws, the first being established in 1973, the most recent in 1987. Many of the initial by-laws have since been amended.

The province of Manitoba had two municipalities with smoking by-laws, Winnipeg (1983) and Brandon (1986). Between 1980 and 1987, nine Saskatchewan municipalities implemented by-laws limiting or banning smoking. British Columbia reported thirty-five municipalities with smoking by-laws. Many of them had been implemented in the second half of the 1980s.

By late 1988, seven Alberta communities had passed by-laws limiting smoking in public and in some workplaces. Edmonton brought in its first smoking by-law in 1981 and amended it in 1988. In 1983, Lethbridge established its smoking by-law (amended in 1986). Calgary waited until 1985 to introduce such a by-law (amended in 1987). In the years 1986 and 1987, the cities of Fort McMurray, Grande Prairie, and Red Deer, and the county of Strathcona (containing the large suburb community of Sherwood Park) also established their first smoking by-laws.

In all seven of these communities, smoking was restricted or prohibited in restaurants, hospitals, service counters, and public transportation vehicles. Six communities targetted smoking in places of public assembly and in retail stores. By-laws in five communities restricted smoking in bars,

lounges, and night clubs, as well as in banks and municipal offices. But municipal legislators in Alberta have been more cautious about legislating against smoking in the workplace. As of November, 1988, only Edmonton, Red Deer, and Strathcona county had by-laws which extended this far. In general, these by-laws required employers (with some exceptions) to designate (and place signs in) restricted smoking areas, and to ensure compliance with the smoking policy.

Thus, in the province of Alberta, federal smoking legislation does not extend beyond federal government workplaces, mandatory provincial workplace smoking legislation is absent, and municipal by-laws have not moved far in the direction of restricting smoking in the workplace. It is not surprising, then, that the 1988 Calgary Health Services study revealed that 53.1% of the 1720 Alberta businesses which responded to the survey had no smoking policy and were not considering one (Abernathy et al., 1989). Only 14.4% of the businesses had formal written workplace smoking policies, almost one-third (30.3%) had informal unwritten policies, and a handful (2.2%) were investigating the possibility of implementing such policies. Among the formal policies, most (84%) had been implemented within the previous five years (particularly in 1987 or 1988).

Occupational and Workplace Size Differences in Workplace Smoking Policies

While 40% of the Canadian employed labour force reported the existence (in 1986) of designated smoking and non-smoking areas in their workplace, there are distinct occupational differences (Millar and Bisch, 1989). The highest proportion of designated smoking areas was found in professional fields (55%) and the lowest (17%) in the primary blue-collar employment areas. The same study also showed that 53% of employed Canadians were permitted to smoke in their immediate work area (even if they personally did not do so). Again, the highest proportion was observed among transportation workers (67%), and the lowest among professionals (39%).

In their recent Alberta survey, Abernathy et al. (1989) found a strong positive correlation between the size of a work organization (the number of employees) and the presence of a workplace smoking policy. Thus, while only a minority of Alberta businesses had formal smoking policies, these tended to be larger organizations. Hence, the proportion of employed Albertans covered by workplace smoking policies would probably be larger than the proportion of businesses with such policies.

Abernathy et al. (1989) also observed that retail stores were most likely to have informal policies while manufacturing and natural resource industries typically had no policy. Community size did not appear to affect whether a business had some type of workplace smoking policy. This suggests that the impetus to introduce such policies has not come directly from the municipal by-laws introduced in larger Alberta urban centres but, rather, from a general shift in societal values and preferences regarding smoking in the workplace.

Public Reactions To Workplace Smoking Policies

A large number of studies have shown that the public at large, as well as business proprietors, are in favour of smoking restrictions in public places (Stanwick, Thompson and Wilson, 1988; Stanwick et al., 1988; Pederson et al., 1989; Rigotti, 1989; Jeffery et al., 1990). The rapid emergence in the last few years of municipal by-laws restricting smoking in public places clearly reflects this shift in social values.

Research is also beginning to indicate a growing acceptance, even among smokers themselves, of smoking restrictions in the workplace. In the 1970s, such attempts to respect the rights of the non-smoker were often viewed as draconian tactics. Today, workplace smoking restrictions are coming to be seen as normal, while their absence is noted. This dramatic shift over the past decade reflects an increased awareness of the health effects of passive smoking (Hammel-Smith, 1989). In short, society has begun to recognize and protect the rights of all employees to a smoke-free workplace (Rea, 1987:16).

Recent public opinion surveys reveal fairly consistent findings about North Americans' reactions to workplace non-smoking policies. For example, a 1986 Environics national survey revealed that 70% of Canadians were in favour of legislation restricting workplace smoking (Biscott, 1987). Another 1986 survey conducted in Ontario by the Non-Smokers Rights Association showed over 80% of both smokers and non-smokers supporting restrictions on workplace smoking (Rea, 1987). A 1985 U.S. Gallup Poll found 79% of the American population were in favour of more restricted smoking in the workplace (Gallup, 1985). Studies such as these point to the conclusion that Americans (and presumably also Canadians) would prefer even more stringent and global restrictions on workplace smoking than now exist (Rigotti, 1989).

As one might expect, smokers, particularly heavy or long-term smokers, are somewhat less receptive to such ideas (Green and Gerken, 1989). Nevertheless, a remarkably high proportion of American smokers would (or do) accept some restriction of their smoking at work. For example, the 1985 Gallup Poll mentioned above showed 76% of smokers in favour of smoking being restricted to designated areas in workplaces.

Several other socio-demographic variables also tend to be associated with acceptance of antismoking restrictions. A 1989 survey of Ontario residents showed that, among smokers, men, youth, and the never married were less receptive to antismoking policies in both public and workplaces (Pederson et al., 1989). In addition, those with less knowledge of the effects of passive smoking were more likely to oppose smoking limitations. Among non-smokers, younger, less educated, and never-married respondents were less likely to support smoking restrictions. Similar findings are reported by Sorensen and Pechacek (1989) who also identify individuals in sales and blue-collar

occupations as less supportive of antismoking policies.[3]

Surveys of the attitudes of employees (as compared to the general public) also tend to show majority support for workplace smoking restrictions. For example, the 1986 Labour Force Survey revealed that 81% of employed Canadians were in favour of smoking restrictions in places of employment (Millar and Bisch, 1989). Reflecting patterns observed for the general public, this study also showed non-smokers to be more supportive of workplace smoking restrictions, although a majority of smokers (66%) did support some kind of anti-smoking policy. Women, and those in professional occupations (90%) as compared to other types of work (e.g. 71% of construction and transportation workers), were more likely to favour restrictions on smoking in the workplace.

A large number of other studies report similar findings, although the level of support among employees for workplace smoking restrictions varies because of sampling, measurement, and other methodological differences across the studies. An Australian survey of over 4000 public service employees found that the majority (76%) approved of a smoking ban in their workplace prior to its formal adoption, although 52% of the smokers disapproved (Borland et al., 1989). Biener et al. (1989) observed that over 90% of non-smokers and 67% of smokers approved of a restricted smoking policy in their hospital. Similar findings in another hospital were reported by Andrews (1983) who found more than 90% of non-smokers in favour of a workplace restricted smoking policy, compared to over 80% of smokers. A survey of blue-collar union members in a high-health-risk industry showed 82% of workers in favour of a restricted smoking policy, including 77% of smokers. However, Peterson et al. (1989) found a somewhat different pattern of results in an insurance company where 67% of non-smokers but only 19% of smokers approved of a recently introduced anti-smoking policy.

The type of smoking policy which is introduced within a work organization is obviously related to the level of support that one might expect. After studying seven different Minnesota workplaces, Sorensen and Pechacek (1989) observed that the majority of smokers and recent ex-smokers supported policies which allowed smoking in designated restricted areas. Smokers were less positive about smoking bans than about restricted smoking policies or designated smoking areas.

In addition, the implementation of a workplace smoking policy may itself affect attitudes towards such policies. In other words, workers may become more accepting of a policy after becoming accustomed to it. A research report prepared by Calgary Health Services (1988) indicated that 50% of respondents in a survey favoured municipal by-laws requiring all workplaces to have a formal smoking policy. This proposition was most popular (68%) among employees working in an organization which had such a formal policy. Six out of ten individuals employed in organizations with an informal policy were in favour, compared to only 38% in work organizations without any smoking policy.

In summary, there appear to be socio-demographic differences in attitudes towards workplace smoking policies. Males, and those younger and less educated, are typically less accepting of such policies.

3 An exception to this pattern of findings is the evidence reported by Green and Gerken (1989) that income and education were unrelated to attitudes toward smoking restrictions.

Smokers tend to be less supportive of workplace smoking restrictions, but most studies still show a majority in favour. Finally, it is apparent that outright smoking bans are less popular than restricted smoking policies, among both smokers and non-smokers (Dewey, 1985; Rosenstock et al., 1986; Petersen et al., 1988; Sorensen and Pechacek, 1989; Biener et al., 1989; Millar and Bisch, 1989). But despite these variations, surveys of the general public as well as studies restricted to the employed typically show a large majority in favour of some form of workplace smoking policy.

Research Questions

The research literatures reviewed above inform us, to an extent, about workplace smoking policies and reactions to them. However, there are also a number of important questions that remain unanswered. In addition, the recent implementation of new smoking-related legislation in many locations makes it worthwhile to re-examine some issues considered in previous studies. Hence, the data analyses presented in this report are guided by the following general research questions:

- How many, and which, Albertans continue to smoke?
- How widespread are workplace "no smoking" policies in both urban and rural parts of the province?
- Which labour force sub-groups are most likely to be affected by such policies?
- How much support exists for these "no smoking" policies among different sub-groups of Albertans?
- How often are smoking restrictions violated? How do Albertans react to such infractions of "no smoking" policies?
- In general, what kinds of opinions about smoking and about smoking-related legislation are held by Albertans? Which population sub-groups have stronger feelings on these issues?
- Can the reasons which Albertans give for (possibly) quitting smoking provide us with some ideas of better ways of implementing workplace "no smoking" policies?

Research Methods

Sampling and Data Collection

The 1990 Alberta Survey was the fourth in an annual series of province-wide public opinion surveys completed by the Population Research Laboratory at the University of Alberta (Kinzel and Odynak, 1990). The special topic for the 1990 Alberta Survey was Health in Alberta. Hence, questions about use of tobacco, restrictions on smoking, and other smoking-related topics (see Appendix A) were only some of the health-related questions included in this survey.[4]

A total of 1245 Alberta adults (18 years of age and older) were interviewed in February and March of 1990. Face-to-face interviews were conducted in the city of Edmonton, while telephone interviews were completed with respondents living elsewhere in the province.[5] In Edmonton, a random sample of household addresses was drawn from a computerized list of all city households compiled in the 1989 municipal census. Random-digit-dialing techniques were employed in the rest of the province. In both the telephone and face-to-face modes of data collection, professional interviewers used a quota sampling procedure to construct a sample (one respondent per household) with equal proportions of female and male respondents. Interviewers called back repeatedly (up to four times face-to-face, and up to ten times in the telephone survey), and at different times of the day and week, in situations where no initial contact could be made. This extra effort resulted in a high response rate for the study (75% in Edmonton and Calgary, and 80% in the rest of the province).

Compared to its share of the provincial population, the city of Edmonton was over-sampled in this survey (n = 448), while Calgary (n = 401) and the rest of the province (n = 396) were under-sampled. The sample was subsequently weighted to reflect the actual share of the Alberta population resident in Edmonton, Calgary, and the rest of the province. Estimates from the weighted

4 The Alberta Survey is a multi-topic, multi-client public opinion survey. Questions on a wide range of topics are submitted for possible inclusion by academic researchers as well as by government departments and non-profit organizations. The special topic each year (Family Violence in 1987; Coping with the Recession in 1988; The Changing Family in Alberta in 1989; Political Culture in Alberta in 1991) is chosen in advance, and an effort is made to solicit questions related to this topic. However, the differing research interests of participants means that a significant number of other questions are also included each year.

5 Telephone interviews are the only cost-effective method of surveying individuals living across the province. However, face-to-face interviews were done in Edmonton to maintain comparability with previous Edmonton Area Studies which have been completed annually, using a face-to-face mode of data collection, since 1977. The same dual modes of data collection have been employed in previous Alberta Surveys. An analysis of the 1988 results, which included an additional set of telephone interviews in Edmonton, revealed that the two modes of data collection produce similar results (Lalu, 1989). Other reviews of the literature on survey research methods also conclude that both methods produce equally reliable and valid results (Bradburn, 1983:296).

sample (Edmonton = 317, 25.5%; Calgary = 349, 28.0%; other Alberta = 579, 46.5%) are presented in this report. Within the other Alberta (weighted) sub-sample, 14.4% of the respondents lived in other smaller cities,[6] 14.0% lived in towns, 4.2% were residents of villages, and the rest (13.7%) were rural residents. For analyses presented in this report, towns, villages and rural areas are combined into a single category.

Confidence intervals around population estimates generated from a provincial sample of 1245 are relatively small (roughly plus or minus 2.5%, 19 times out of 20). Estimates from sub-samples (e.g. female smokers age 65 and older) would obviously have larger confidence intervals. In this report, sub-sample cell sizes are provided wherever possible, so that readers can determine the confidence interval for specific estimates if they wish. However, any sub-sample estimates based on fewer than ten cases (in the weighted sample) are suppressed. In addition, if small differences across sub-samples are observed, standard statistical significance tests are used to determine whether these differences should be taken to indicate population differences. Nevertheless, it is important to note that statistical significance with a sample of this size need not mean substantive significance (Cohen, 1990).

Sample Characteristics

The 1990 Alberta Survey (weighted) sample contained almost equal proportions of women (49.5%) and men (50.5%). The average age of respondents was 41.1 years. One-quarter (24.9%) were under 30, 40.7% were in the 30 to 44 year range, 20.0% were 45 to 59 years old, and 14.4% were 60 and older. Less than one in five (17.6%) sample members were single (never married), two-thirds (66.6%) were married or living in a common-law relationship, 10.8% were divorced or separated, and 5.0% were widowed. More than four out of five (81.6%) had been born in Canada. Comparisons to Alberta postcensal estimates show that this sample is representative of the population from which it was drawn (Kinzel and Odynak, 1990).

Sample members reported an average of 13.3 years of completed education. Nearly one in four (23.6%) had not completed high school, 22.8% were high school graduates, and 37.3% had some additional post-secondary education. Almost one in six (16.3%) were university graduates. Less than one-fifth (16.1%) of the respondents reported a total 1989 household (gross) income under $20,000. Almost one-third (30.1%) placed their 1989 household income between $20,000 and $39,999, one-quarter (24.2%) reported it to be between $40,000 and $59,999, while 29.6% had a 1989 household income of $60,000 or higher. Two-thirds of the sample members owned their own home, while one-third lived in rented accommodation.

At the time of the interview, 55.6% of the respondents were employed full-time, 10.7% were working part-time, and 4.5% were unemployed. This translates into a labour force participation rate of 70.8%, and an unemployment rate of 6.2%. The equivalent Labour Force Survey estimates for Alberta in February, 1990 were 71.5% and 7.3%, respectively (Statistics Canada, 1990). More than one in ten (11.2%) of the respondents were retired.

6 Smaller cities in Alberta would include communities such as Lethbridge, Red Deer, Fort McMurray, Grande Prairie, Medicine Hat, and Lloydminster.

Survey Results

Smoking Behaviour in Alberta

In 1990, 29.6% of Albertans were daily cigarette smokers and another 5% were occasional smokers (Table 1). Men were more likely than women to be regular smokers (33.7% compared to 25.7%), while roughly similar proportions of women and men were occasional smokers. Recognizing that the 1990 Alberta Survey excluded 15 to 17 year olds while other national surveys do not, these results closely resemble those reported in other recent examinations of smoking behaviour in the province (Statistics Canada, 1987; Health and Welfare Canada, 1988). Over one-third of Albertans had never smoked, and another 28.8% had quit smoking. Women were more likely than men to have never smoked.

Table 1

Cigarette Smoking by Sex and Age, Alberta, 1990.

Percent

	Never Smoked	Quit	Occasionally	Every Day	Total	(N)
TOTAL	**36.9**	**28.8**	**5.0**	**29.6**	**100.0**	**(1245)**
Female	41.9	26.8	5.6	25.7	100.0	(612)
Male	31.0	31.1	4.2	33.7	100.0	(627)
18-24 years	43.8	15.4	7.1	33.7	100.0	(143)
25-44 years	35.1	26.1	6.3	32.6	100.0	(668)
45-64 years	34.4	34.2	-	28.8	100.0	(297)
65+ years	39.7	46.0	-	13.2	100.0	(130)
Sex and Age						
Female						
18-24 years	39.2	21.8	-	30.8	100.0	(64)
25-44 years	36.4	27.3	7.3	29.1	100.0	(319)
45-64 years	49.9	24.5	-	22.8	100.0	(155)
65+ years	51.5	33.9	-	-	100.0	(73)
Male						
18-24 years	47.6	10.1	-	36.2	100.0	(78)
25-44 years	33.8	25.3	5.3	35.6	100.0	(352)
45-64 years	17.4	44.9	-	35.5	100.0	(141)
65+ years	24.6	61.5	-	-	100.0	(57)

Source: 1990 Alberta Survey

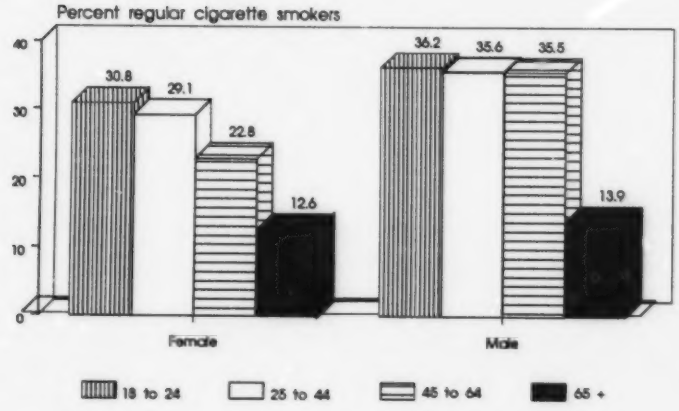
The age differences in smoking behaviour observed in the Alberta Survey also reflect the patterns observed in other recent national studies. About one-third of Albertans age 18 to 44 were regular cigarette smokers. Slightly fewer of those age 45 to 64 smoked cigarettes every day (28.8%), compared to only 13.2% of seniors (Table 1).

Among males, similar proportions (just over one-third) of the 18 to 24, 25 to 44 and 45 to 64 year old groups were regular cigarette smokers, while considerably fewer of those 65 and older smoked cigarettes every day (Figure 1). Among women, about 30% of those age 18 to 44 were regular smokers, with the proportion declining across the next two age groups. Thus, similar proportions of women and men 65 and older were non-smokers. However, within this age group, a large majority of non-smoking males had quit smoking while the majority of non-smoking females had never smoked (Table 1).

Comparing the two largest Alberta urban centres with other smaller cities, and with towns, villages and rural areas, we observe few differences in the proportion of women smoking, with one exception. Table 2 reveals a somewhat higher proportion of women in Edmonton who regularly smoked cigarettes (31.9%). Roughly one-quarter of the women in Edmonton and Calgary, and in towns, villages and rural areas were former cigarette smokers, compared to 34.5% in medium sized Alberta cities.[7] Geographical differences in the smoking behaviour of men are somewhat clearer (Table 2). These survey data reveal a higher proportion of regular male smokers in smaller urban centres and in rural Alberta compared to Edmonton and Calgary. Alternatively, a larger proportion of Edmonton and Calgary males had never smoked.

Figure 1

Regular Cigarette Smoking
by Sex and Age



Source: 1990 Alberta Survey

7 This relationship between location of residence and current smoking behaviour was not statistically significant ($p = .27$).

Table 2

Cigarette Smoking by Sex and Location, Alberta, 1990.

Percent

	Never smoked	Quit	Occasionally	Every Day	Total	(N)
TOTAL	**36.9**	**28.8**	**5.0**	**29.6**	**100.0**	**(1245)**
Sex and Location						
Female						
Edmonton	38.9	22.1	7.1	31.9	100.0	(160)
Calgary	46.7	25.1	-	24.1	100.0	(1)
Other Cities	34.5	34.5	-	23.6	100.0	(81)
Town/Village Rural Areas	44.2	27.5	5.8	22.5	100.0	(200)
Male						
Edmonton	37.4	26.6	-	32.0	100.0	(157)
Calgary	33.9	30.7	6.4	29.2	100.0	(175)
Other Cities	26.5	36.8	-	35.3	100.0	(99)
Town/Village/ Rural Areas	26.1	32.1	-	38.1	100.0	(196)

Source: 1990 Alberta Survey

Table 3 compares the smoking behaviour of different age cohorts in the four geographical locations within the province, but combines female and male respondents. In the two youngest age cohorts, Calgary residents are somewhat less likely than Edmonton residents to smoke regularly. As the data in Table 2 suggest, this city difference is mainly due to the somewhat smaller proportion of Calgary women who smoke regularly. Younger Albertans (age 18 to 24) living in towns, villages or rural areas are more likely to smoke regularly than their contemporaries living in Calgary or Edmonton.

Further cross-tabulations by gender result in cell sizes too small for reliable estimates. However, Table 2 suggests that the difference between Edmonton/Calgary and the rest of the province is also a function of different proportions of males who smoke regularly. Thus, Tables 2 and 3 together suggest a higher proportion of regular cigarette smokers among young males living outside of the two major urban centres in Alberta.

The relationship between education and smoking behaviour varies by gender. Among women, similar proportions of those with less than 12 years (27.0%) and those reporting 13 to 15 years of completed education (27.6%) were regular cigarette smokers (Table 4). The proportion of daily smokers was higher (33.7%) among women who had completed high school but not gone on to further education, but much lower (9.4%) among women with a university degree (or equivalent in years of education). About four out of ten women in the three lower educational groups had never smoked, compared to over half (51.6%) of those with a university degree or equivalent.

Table 4 reveals a systematic linear relationship between educational attainment and smoking behaviour for men, with the least educated being most likely to smoke regularly (48.2%) and the most educated demonstrating the lowest incidence of daily cigarette smoking (16.2%). Alternatively, among men, the higher the education the

Table 3

Cigarette Smoking by Location and Age, Alberta, 1990.

Percent

	Never smoked	Quit	Occasionally	Every Day	Total	(N)
TOTAL	**36.9**	**28.8**	**5.0**	**29.6**	**100.0**	**(1245)**
Location and Age						
Edmonton						
18-24 years	52.2	-	-	32.8	100.0	(48)
25-44 years	37.1	22.7	6.0	34.3	100.0	(178)
45-64 years	30.2	34.9	-	27.9	100.0	(60)
65+ years	38.6	36.4	-	-	100.0	(31)
Calgary						
18-24 years	49.0	-	-	27.5	100.0	(44)
25-44 years	36.8	28.5	5.9	28.9	100.0	(203)
45-64 years	33.8	35.2	-	28.2	100.0	(62)
65+ years	57.9	31.6	-	-	100.0	(36)
Other Cities						
18-24 years	-	-	-	-	100.0	(17)
25-44 years	26.2	26.2	-	41.5	100.0	(95)
45-64 years	38.2	47.1	-	-	100.0	(49)
65+ years	-	72.7	-	-	100.0	(16)
Town/Village/Rural Areas						
18-24 years	30.4	-	-	39.1	100.0	(33)
25-44 years	35.9	26.6	7.0	30.5	100.0	(187)
45-64 years	35.3	28.2	-	35.3	100.0	(124)
65+ years	32.4	52.9	-	-	100.0	(49)

Source: 1990 Alberta Survey

more likely that the individual had never smoked. Thus, as in other studies, we observe that higher educational attainment is associated with a lower probability of smoking, but the relationship is more systematic for men in this 1990 Alberta survey.

In general, the highest proportion of regular cigarette smokers is found among those in blue-collar occupations, particularly construction, where 59.5% of the (primarily male) respondents admitted to smoking cigarettes daily (Table 5).[8] The lowest level of regular smoking was noted in managerial and professional occupations (19.3%).

In Figure 2, the more specific occupational categories are collapsed into three broad groups, allowing an examination of differences in regular cigarette smoking by both occupation and gender. Female

8 The low level of regular smoking in primary occupations may be, in part, a result of a lower than average rate of smoking among those employed in agriculture (a group which would also contain some farm wives). Small cell sizes make it difficult to further examine this divergence from the blue-collar pattern.

Table 4

Cigarette Smoking by Sex and Education, Alberta, 1990.

Percent

	Never smoked	Quit	Occasionally	Every Day	Total	(N)
Female						
Education (years of completed education)						
<12 years	40.0	26.9	-	27.0	100.0	(123)
12 years	40.9	20.4	-	33.7	100.0	(149)
13-15 years	39.5	27.4	5.5	27.6	100.0	(218)
16+ years	51.6	32.8	-	9.4	100.0	(115)
Male						
Education (years of completed education)						
<12 years	15.5	34.8	-	48.2	100.0	(155)
12 years	23.8	30.5	5.4	40.2	100.0	(114)
13-15 years	30.7	29.4	5.7	34.2	100.0	(179)
16+ years	50.3	29.3	-	16.2	100.0	(178)

Source: 1990 Alberta Survey

Table 5

Cigarette Smoking by Occupation, Alberta, 1990.

Percent

	Never smoked	Quit	Occasionally	Every Day	Total	(N)
Occupation *						
Man./prof.	40.6	33.5	6.6	19.3	100.0	(412)
Clerical	36.9	26.0	4.7	32.4	100.0	(218)
Sales	43.5	27.2	-	26.0	100.0	(111)
Service	37.5	28.1	-	30.4	100.0	(118)
Primary	47.2	19.4	-	27.8	100.0	(72)
Manufacturing	29.2	30.1	-	37.6	100.0	(97)
Construction	14.6	22.8	-	59.5	100.0	(111)
Other blue collar	26.2	30.8	-	35.2	100.0	(71)

* Includes those currently employed in this occupation, as well as those unemployed or out of the labour force but still identifying themselves within this occupational category (N = 1210).

Source: 1990 Alberta Survey

managers and professionals are a little less likely to smoke cigarettes daily than are their male occupational counterparts (17.2% versus 21.9%). Women obviously outnumber men in clerical, sales and service occupations, but are equally likely to be regular smokers (30.8% compared to 28.9%). Less than one-third (31.1%) of the relatively few women in the traditionally male blue-collar occupations smoke daily, compared to a substantially larger proportion (40.5%) of the many more men with blue-collar occupations. While the size of the 1990 Alberta Survey sample does not allow more detailed comparisons by occupation and gender, these findings are similar to those obtained in other recent national surveys of Canadians' smoking behaviour (Health and Welfare Canada, 1988).

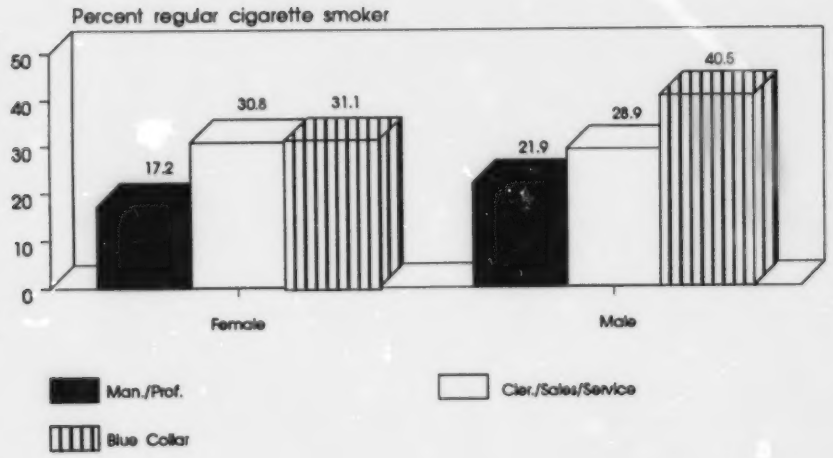
Workplace Smoking Policies in Alberta

A total of 66.4% of the 1990 Alberta Survey sample were employed when interviewed. Of the employed, 83.8% were working full-time and 16.2% were in part-time jobs. All employed respondents were asked whether there was a "no smoking policy" at their place of work. Almost two-thirds (64.4%) reported a smoking policy while 35.6% stated that a policy did not exist. Thus, when we consider the proportion of employed Albertans affected by a workplace smoking policy, it is apparent that such policies have become the norm.

Survey respondents acknowledging some kind of smoking policy in their workplace were asked whether it allowed no smoking at all (a total ban) or whether it restricted smoking to certain locations. The latter type of policy was more common, making up 62% of all smoking policies reported by employed

Figure 2

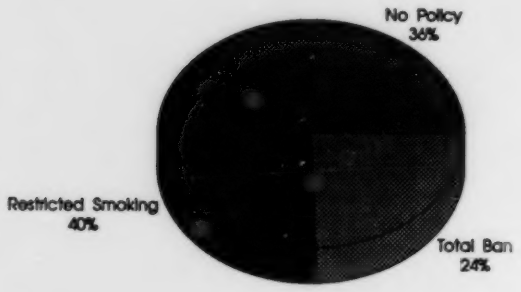
Regular Cigarette Smoking
by Sex and Occupation



Source: 1990 Alberta Survey

Figure 3

Workplace Smoking Policies
Reported by Employed Albertans, 1990



Source: 1990 Alberta Survey

(N = 808)

survey respondents. Thus, we find that just over one-third (35.6%) of employed Albertans are working in a setting where smoking is not limited in any way, 40% are protected by a restricted smoking policy, and about one-quarter (24.4%) are employed in a workplace where smoking is completely banned (Figure 3). While smoking policies have become the norm, smoking bans are still not particularly widespread. Nevertheless, we can see considerable movement since 1985 when only 10% of employed Canadians reported a smoking ban in their workplace (Health and Welfare Canada, 1988:19).

The presence of smoking policies varies substantially across occupational groups in Alberta (Table 6). Almost half of those employed in sales occupations (49.3%) report no smoking policy at all, along with 55.4% in construction, 54.0% in other blue-collar occupations, and four out of five (79.5%) Albertans working in primary occupations. Alternatively, only 22.6% of managers and professionals and one-quarter of clerical workers are employed in workplaces without any kind of smoking policy. In brief, with the exception of sales workers, one-half of whom are not covered by a workplace smoking policy, white-collar workers are much more likely than those in blue-collar occupations to be employed in settings where smoking policies are in effect.

Taking the type of smoking policy into account, we observe that about one-third of managers and professionals (32.8%) and of clerical workers (35.3%) are employed in workplaces where smoking is completely banned (Table 6). Outright smoking bans are largely absent in the blue-collar occupational categories, while one in five sales and service workers report these more stringent workplace smoking policies. These differences largely reflect the types of workplaces in which different occupational groups are employed. Managers and professionals, along with clerical workers, are more likely to be employed in government departments, hospitals, schools, and large corporations, the types of work organizations in which restricted smoking policies and total smoking bans have become most common.

Table 6

Workplace Smoking Policies by Occupation, Alberta, 1990.

Percent

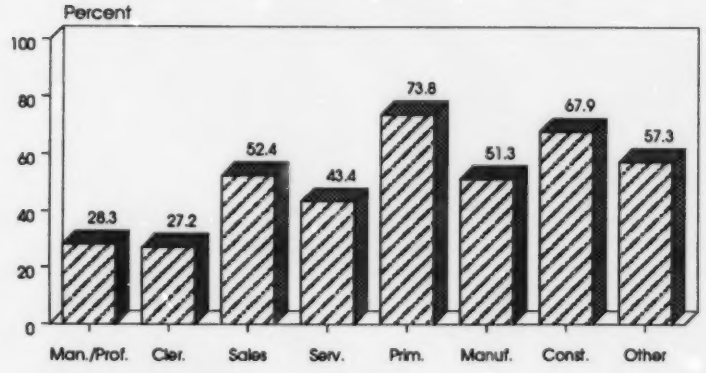
	No Policy	Restricted Smoking	Total Ban	Total	(N)*
Occupation					
All occupations	35.6	40.0	24.4	100.0	(808)
Man./prof.	22.6	44.6	32.8	100.0	(308)
Clerical	24.9	39.8	35.3	100.0	(131)
Sales	49.3	30.6	20.2	100.0	(73)
Service	37.7	42.3	20.0	100.0	(56)
Primary	79.5	-	-	100.0	(44)
Manufacturing	37.3	57.1	-	100.0	(69)
Construction	55.4	33.8	-	100.0	(74)
Other blue collar	54.0	34.3	-	100.0	(52)

* Currently employed only.

Source: 1990 Alberta Survey

Figure 4

Permission to Smoke in Immediate Work Area by Occupation, Alberta, 1990



Source: 1990 Alberta Survey

Along with questions about formal smoking policies, survey respondents were also asked whether smoking was permitted in their immediate work area. Forty-one percent answered "yes", and another 1.6% said they worked at home or alone in a vehicle where the issue of permission did not arise. A majority of Albertans (57.5%) work in a setting where some kind of formal or informal policy does not allow them, or others, to smoke in their immediate work area. Thus, while only one in four are employed in settings where smoking is completely banned (Figure 3), more than half work in smoke-free areas.

Again, as one might expect, there are substantial differences across occupational categories in answers to this question (Figure 4). Albertans employed in managerial and professional (28.3%), as well as in clerical occupations (27.2%), were least likely to say that smoking was permitted in their immediate work area. Those in primary (73.8%) and construction occupations (67.9%), the types of jobs most frequently done out-of-doors, were most likely to report that smoking was permitted in their immediate work area.

Since women and men, and different age groups, are not equally represented across the occupational categories, we also find age and gender differences in reports of the presence of workplace smoking policies. Table 7 displays these differences, revealing that women are more likely than men (30.3% versus 20.2%) to be employed in settings

Table 7

Workplace Smoking Policies by Sex and Age, Alberta, 1990.

Percent

	No Policy	Restricted Smoking	Total Ban	Total	(N)*
TOTAL	**35.6**	**40.0**	**24.4**	**100.0**	**(808)**
Female	26.5	43.3	30.3	100.0	(335)
Male	42.1	37.7	20.2	100.0	(472)
18-24 years	42.3	33.8	20.7	100.0	(85)
25-44 years	35.6	40.0	24.4	100.0	(520)
45-64 years	33.1	45.1	21.8	100.0	(188)
65+ years	-	-	-	100.0	(12)
Sex and Age					
Female					
18-24 years	-	34.8	43.8	100.0	(34)
25-44 years	30.0	41.1	28.9	100.0	(217)
45-64 years	21.1	51.3	27.6	100.0	(79)
65+ years	-	-	-	100.0	(5)
Male					
18-24 years	56.2	23.7	20.1	100.0	(51)
25-44 years	39.6	39.2	21.2	100.0	(304)
45-64 years	41.7	40.6	17.7	100.0	(109)
65 +years	-	-	-	100.0	(7)

* Currently employed only.

Source: 1990 Alberta Survey

where smoking is totally banned or where smoking restrictions are in place (43.3% compared to 37.7%). Consequently, 42.1% of men and only 26.5% of women are employed in workplaces without any smoking policy at all.

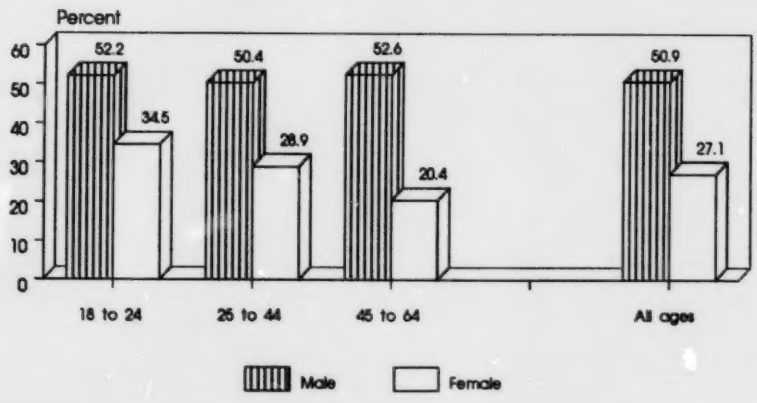
Although workers of different ages are about equally likely to be employed in settings where smoking is banned, there is evidence in Table 7 that older workers are more likely to be found in workplaces where smoking is restricted. When both age and gender are brought into the picture, we can see that young male workers are particularly likely to be employed in work organizations where no smoking policies exist (56.2%). These differences can, of course, be traced back to the occupational differences displayed in Table 6.

Figure 5 highlights age and gender differences in the proportion of Albertans who say that smoking is permitted in their immediate work area. Just over half (50.9%) of all employed male respondents answered "yes", compared to just over one-quarter (27.1%) of all employed women. Age does not influence this pattern for men, but older women are less likely to report that smoking is allowed in their immediate work area.

We can see the effects of occupational segregation by gender and age in these results. Men, both younger and older, tend to be employed across a wide range of blue-collar and white-collar occupations. While the percentages vary considerably across these occupations (see Figure 4), on average, about 50% of employed males report that smoking is permitted in their immediate workplace. Women, on the other hand, are unlikely to be employed in the blue-collar occupations where very few

Figure 5

Permission to Smoke in Immediate Work Area by Sex and Age, Alberta, 1990



Source: 1990 Alberta Survey

Table 8

Workplace Smoking Policies by Location, Alberta, 1990.

	Percent				
	No Policy	Restricted Smoking	Total Ban	Total	(N)*
TOTAL	**35.6**	**40.0**	**24.4**	**100.0**	**(808)**
Edmonton	23.5	47.6	28.9	100.0	(208)
Calgary	37.0	33.6	29.4	100.0	(231)
Other cities	37.3	42.2	20.5	100.0	(121)
Town/Village/ RuralAreas	43.8	38.5	17.8	100.0	(247)

* Currently employed only.

Source: 1990 Alberta Survey

smoking restrictions exist. However, younger women are typically employed in sales and service occupations where smoking in the immediate workplace is frequently allowed (Figure 4). But after some years in the labour force, women tend to move into clerical and professional occupations where smoking is somewhat more restricted. Consequently, compared to older women, younger women are more likely to report that smoking is permitted in their immediate workplace (Figure 5).

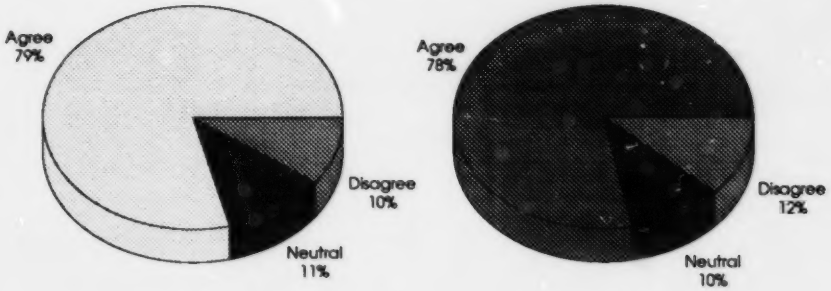
Finally, Table 8 shows the proportion of employed Albertans reporting some kind of workplace smoking policy, separately for Edmonton, Calgary, other cities, and the rest of the province (towns, villages and rural areas). Similar proportions of employed Edmonton and Calgary residents (28.9% and 29.4%) report working in an organization where smoking is completely banned. Relatively fewer of those living in other urban or rural centres (about one in five) say that smoking is banned in their workplace. Less than one-quarter of employed Edmonton residents say that there is no smoking policy at all in their workplace, compared to somewhat more than one-third of those living in Calgary or other cities, and 43.8% of those living in towns, villages and rural areas (Table 8).

A similar pattern is observed for the additional question about whether smoking was permitted in the respondents' immediate work area. While 57.5% of all sample members answered "no", the proportion was significantly ($p < .01$) higher in Edmonton where 69.3% said that smoking was not permitted in their immediate work area. Between 53% and 56% in Calgary and other parts of the province answered "no" to this question.

Thus, Edmonton appears to have moved furthest toward eliminating smoking in the workplace, with the highest proportion of employees reporting some kind of workplace smoking policy, and the highest proportion saying that smoking was not permitted in their immediate work area. An equivalent proportion of Calgary respondents reported a smoking ban, but relatively fewer noted a restricted smoking policy. In addition, a smaller proportion of Calgary sample members said that they were not permitted to smoke in their immediate work area. The higher proportion of Edmonton workers in organizations with "no smoking" policies

Figure 6

Agreement with Workplace Smoking Policy by Sex, Alberta, 1990



Women (n = 245)

Men (n = 272)

Source: 1990 Alberta Survey

may be the result of the greater number of government employees in this city. These 1990 survey results also suggest that other Alberta cities are not far behind the two major metropolitan areas, while workplaces in smaller urban centres and rural areas are somewhat less likely to have smoking policies of any kind.

Reactions to Workplace Smoking Policies

Survey respondents who reported a "no smoking" policy in their workplace (either a total ban or restricted smoking) were asked how strongly they agreed or disagreed with this policy. In total, 78.9% of these employed Albertans said they agreed with the "no smoking" policy,[9] with 60.6% stating that they agreed strongly. Women and men working in organizations with "no smoking" policies were equally likely to agree with the policy (Figure 6).

9 Respondents answered on a seven-point scale ranging from "strongly disagree" (1) to "strongly agree" (7). For these reports of percentages agreeing, scores of 5, 6 and 7 are combined into the "agree" category.

Table 9

Agreement with Smoking Policy by Type of Policy, Sex, and Current Smoking Behaviour, Alberta, 1990.

	Average level of agreement #				
	Never Smoked	Quit	Occasionally	Every Day	Total
TOTAL	**6.22**	**6.01**	**5.85**	**4.92**	**5.80***
	(192)	**(168)**	**(25)**	**(133)**	**(517)**
Restricted	5.99	5.77	6.04	5.01	5.65
	(118)	(97)	(16)	(91)	(322) **
Total ban	6.60	6.35	-	4.75	6.06
	(74)	(71)	(9)	(42)	(195)
Female	6.12	6.21	5.83	4.92	5.84
	(99)	(72)	(15)	(59)	(245)
Male	6.34	5.86	5.89	4.92	5.77
	(92)	(96)	(10)	(74)	(272)
Type of Policy and Sex					
Female					
Restricted	5.86	5.92	6.09	5.11	5.72
	(60)	(43)	(10)	(33)	(146)
Total ban	6.53	6.66	-	4.70	6.02
	(39)	(29)	(5)	(27)	(100)
Male					
Restricted	6.13	5.65	-	4.95	5.59
	(58)	(54)	(7)	(58)	(177)
Total ban	6.68	6.13	-	4.83	6.11
	(34)	(42)	(4)	(15)	(95)

Average of responses on a 1 to 7 (strongly disagree - strongly agree) scale to the question "How strongly do you agree or disagree with this 'no smoking' policy." Sub-sample size (from which mean was calculated) reported in parentheses.

* Differences across current smoking categories are statistically significant ($p < .01$).

** Differences by type of policy are statistically significant ($p < .01$).

Source: 1990 Alberta Survey

These survey results show widespread support for workplace "no smoking" policies among Albertans affected by such policies.

Only a very small minority (9.9% of women and 11.8% of men) disagree with these policies,[10] although there is still considerable variation in the level of agreement. Table 9 compares average scores (on the original seven-point response scale) for women and men, for respondents who smoked and those who didn't, for those affected by smoking bans and those working where smoking was only restricted, and for combinations of these groups.

As already noted, there is very little difference by gender in agreement with workplace "no smoking" policies (Table 9). But respondents working in a setting with a total ban on smoking were more in agreement (an average score of 6.06) than those working in organizations where smoking was restricted to specific locations (an average of 5.65). This is a somewhat unexpected finding, since previcus studies have shown smoking bans to be less acceptable than restricted smoking areas, among both smokers and non-smokers.[11]

As for current smoking behaviour, the average scores in Table 9 clearly show that those who have never smoked are most likely to be in agreement (6.22) followed by those who have quit smoking (6.01), occasional smokers (5.85) and, finally, those who smoke cigarettes daily (4.92). However, even for this last group, the average score is well above the neutral mid-point (4.0), demonstrating considerable agreement with "no smoking" policies, even among regular smokers.

Average scores for combinations of these groups reveal greater variation.
Non-smokers (those who never smoked and those who have quit) report a higher level of agreement with smoking bans (compared to restrictions), while current smokers exhibit a higher level of agreement with smoking restrictions. Thus, it appears that the opinion reversal noted above (smoking bans being assessed more positively) may only have taken place among non-smokers.

Overall, the highest level of agreement is observed among Albertans who have never smoked and are currently working in a setting where a total smoking ban is in effect (female average = 6.53; male average = 6.68). The lowest level of agreement, as one might expect, is among daily smokers employed in organizations where smoking is totally banned (female average = 4.70; male average = 4.83). But, again, these averages are still substantially above the scale mid-point. In short, this survey reveals relatively little outright disagreement with workplace smoking policies (either total bans or restrictions) among employed Albertans affected by them.

10 Given the way the question was worded, it is possible that someone could disagree with a restricted smoking policy because they would prefer a total ban on smoking in their workplace. Alternatively, some smokers working in a setting where smoking was banned might prefer a restricted smoking policy. Presumably these two possibilities would cancel each other. Hence, the overall percentage in agreement with the "no smoking" policy is probably a valid estimate of population support for such policies.

11 Previous studies (Miller and Bisch, 1989; Sorensen and Pechacek, 1989; Rigotti, 1989) asked both smokers and non-smokers to evaluate smoking restrictions as well as total bans. The 1990 Alberta Survey asked respondents to evaluate the smoking policy in their own workplace. Thus, Table 9 compares the evaluations of individuals (smokers and non-smokers) working in locations with different types of smoking policies. While a direct comparison to these previous studies is not possible because of different research designs, the more positive evaluation of smoking bans is still noteworthy.

Further analyses (results not shown) reveal that, among those working in an organization with some kind of "no smoking" policy, better educated Albertans were significantly more likely to agree with the policy ($p < .01$). The average response score was 5.28 for those with less than 12 years of completed education, 5.62 for high school graduates, 5.75 for those with 13 to 15 years of formal education, and 6.18 for those reporting 16 or more years. Manage: and professionals were significantly more likely than clerical, sales and service workers, or blue collar workers, to agree with a "no smoking" policy, if it existed in their workplace (average scores of 6.10, 5.60 and 5.54, respectively). These findings match those reported by other researchers, and largely reflect the lower proportion of smokers among the better educated (Table 4) and among those in managerial and professional occupations (Table 5).[12]

Table 10

Agreement with Smoking Policy by Location and Current Smoking Behaviour, Alberta, 1990.

	Average level of agreement #			
	Never Smoked	Quit	Every day	Total*
TOTAL	**6.22**	**6.01**	**4.92**	**5.80**
	(192)	**(168)**	**(133)**	**(517)**
Edmonton	6.30	6.13	4.40	5.74
	(69)	(39)	(40)	(159)
Calgary	6.22	6.23	5.02	5.88
	(56)	(45)	(36)	(145)
Other cities	6.67	5.48	4.57	5.61
(22)	(31)	(20)	(75)	
Towns/Villages/Rural	5.90	6.06	5.60	5.91
	(45)	(53)	(37)	(139)

See Table 9.

* Total column includes a small number (n = 25) of occasional smokers (see Table 9). A further breaking down of these few cases by location results in sub-sample sizes too small for reliable estimates.

Source: 1990 Alberta Survey

12 Within the educational and occupational sub-groups, the relationship between current smoking behaviour and agreement with a smoking policy (current smokers agreeing less) was consistently observed (results not shown).

Survey respondents working in settings where a larger number of co-workers were smokers[13] were significantly ($p < .01$) less likely to agree with "no smoking" policies. Specifically, the average agreement score for those with no smokers in their immediate work area was 6.58, compared to 5.71 for those reporting between one and five co-workers who smoked, 5.86 for respondents with between 6 and 10 smoking co-workers, and 5.34 for individuals who stated that more than ten of the people in their immediate work area were smokers (results not shown). This might be interpreted to mean that employees working with others who smoke are a bit more reluctant to endorse a "no smoking" policy which restricts the smoking behaviour of their co-workers. More probable is the explanation that those with a higher proportion of smoking co-workers are also more likely to be smokers themselves (e.g. workers in blue-collar occupations; see Table 5).

We have seen some variations across the province in the existence (and type) of "no smoking" policy reported by respondents in the 1990 Alberta Survey. Are there also locational differences in agreement with such policies? Table 10 compares reactions to workplace smoking policies in Edmonton, Calgary, other Alberta cities, and the rest of the province.[14]

As noted for the total province (Table 9), daily smokers in each of the four different residential locations are less likely to be in agreement with "no smoking" policies than are former smokers or those who have never smoked (Table 10). However, there are no substantial (or statistically significant) differences in agreement with such policies across these four locations. While the proportion of regular smokers is somewhat higher in Alberta towns, villages, and rural areas than in larger urban centres (Table 2), and while workplace smoking policies appear to be somewhat less common in smaller centres (Table 8), those living in these centres and working in settings with "no smoking" policies are no more likely to disagree with them. In fact, considering only regular smokers, those living in smaller centres report the highest level of agreement (an average of 5.60) with the smoking policy in their workplace.

13 About one in six (16.7%) of all employed respondents (n = 808) answered that no one in their immediate work area was a smoker. Over half (53.3%) said that between one and five co-workers were smokers, 15.7% reported between six and ten smokers in their immediate work area, 11.7% said more than ten co-workers were smokers, and 2.6% answered "don't know".

14 Male and female responses are combined since gender differences in agreement with smoking policies are small and non-significant (Table 9). In addition, smoking restrictions and smoking bans are not separated, in order to maintain larger sub-cell sizes. A more detailed analysis (results not shown) showed that the relationship between type of policy and current smoking behaviour observed for the whole province (Table 9) was also found within each of the location categories considered in Table 10.

Violations of Public and Workplace Smoking Policies

An estimate of the extent to which public and workplace "no smoking" policies are ignored in Alberta can be obtained from answers to the question (asked of all survey respondents): "in the last month, have you noticed people smoking in any places or areas that did not permit smoking?" One third of the total sample (33.1%) answered "yes" to this question.

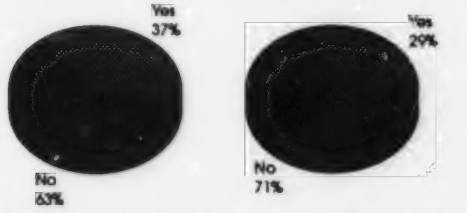
Our review of municipal "no smoking" by-laws in Alberta showed them to be more common and somewhat more encompassing in the larger centres in the province. In addition, this survey shows a larger proportion of employed Albertans in Edmonton and Calgary reporting some kind of "no smoking" policy in their own workplace (Table 8). Given these patterns, we might also expect a larger proportion of Edmonton and Calgary residents to report that they had observed violations of "no smoking" policies within the previous month. Figure 7 reveals a significant ($p < .01$) difference in the predicted direction, with 36.5% of respondents from Edmonton and Calgary stating that they had witnessed at least one smoking policy violation in the previous month, compared to 28.9% of those living elsewhere in the province.

Individuals who had observed such a smoking policy infraction were then asked how often this had occurred. Very similar proportions answered "daily or almost daily" (18.2%), "several times a week" (18.3%), or "three or four times a month" (19.3%). The rest (44.3%) said they had noticed people smoking in non-smoking areas "once or twice" in the past month. While these survey results are obviously not an accurate count of smoking policy infractions, and while they do not indicate a pervasive ignoring of "no smoking" restrictions by Alberta smokers, they do suggest that smoking policy violations are observed fairly often by the general public.

If a respondent indicated that she or he had observed a smoking policy infraction, interviewers were instructed to ask where this had taken place and to probe for any other instances. The 411 respondents who had witnessed smoking policy infractions listed a total of 649 instances (an average of 1.58 each) in a wide range of different locations (Table 11).

Figure 7

Observation of Smoking Policy Infraction by Location, Alberta, 1990



Edmonton/Calgary (n = 666) Other Alberta (n = 576)

Source: 1990 Alberta Survey

Table 11

Observations of Infractions of "No Smoking" Policies in Past Month by Location of Infraction.

Location of infraction	No. of respondents who had observed such infractions	Percent of total sample
Restaurants	115	9.2
Office buildings	91	7.3
Stores	90	7.2
Public transport/bus shelters/terminals	76	5.9
Shopping malls	55	4.4
Workplace	52	4.1
Elevators	41	3.3
Schools/Universities	34	2.7
Hospitals	29	2.3
Arenas	28	2.3
Banks	25	2.0
Other locations	17	1.3

Source: 1990 Alberta Survey

Albertans are most likely to observe smokers ignoring smoking restrictions in restaurants. Almost one in ten (9.2%) of all respondents had witnessed such a smoking policy infraction at least once in the previous month. Somewhat smaller proportions (around 7%) of this province-wide sample had seen people smoking in office buildings or stores where smoking was restricted. About 6% reported observing a smoking policy violation in a public transportation location, and about 4% stated that they had observed someone smoking in a shopping mall where smoking was restricted or prohibited. A similar proportion (4.1%) stated that they had seen the infraction in their own workplace.

At first glance, it appears as if workplace smoking policy violations are relatively infrequent, compared to smoking policy infractions in public places. However, the 4.1% of the total sample who had seen someone smoking in a restricted area in their workplace translates into 6.4% of the currently employed sample members (n = 808). In addition, there is probably some overlap between public and workplaces in answers to this question. For example, some of the survey respondents who observed people smoking in a restricted area in an office building (or a hospital, a store, or a school) might themselves be working in these settings (but not identifying it as their own workplace). Thus, while answers to this question cannot show whether smoking policy violations are more or less common in workplaces (compared to public places), it is clear that workplace smoking policy infractions are not isolated events.

Table 12

Infractions of "No Smoking" Policies in past month by Location of Infraction.

Location of infraction	No. of smokers who had smoked in restricted areas	Percent of all smokers
Office buildings/elevators	16	3.7
Stores/shopping malls	12	2.8
Hospitals	8	1.9
Workplace	7	1.6
Restaurants	5	1.2
Public transport/bus shelters/terminals	5	1.2
Other locations	7	1.6

Source: 1990 Alberta Survey

The 1990 Alberta Survey also asked current smokers (regular or occasional) whether, in the past month, they had "smoked in any places or areas that did not permit smoking?" Only 45 of the 430 smokers (10.5%) admitted to smoking in a restricted area. This very low estimate requires careful interpretation since, as we noted above, one-third of the total sample (n = 411) reported seeing someone else smoking in a place where smoking was not allowed. Furthermore, the majority of these individuals said that they had observed such a smoking policy infraction more than once in the past month.

There are several possible explanations for these apparently contradictory findings. First, some individuals who had smoked in restricted places might have been unaware of the "no smoking" rules which they had broken. Since "no smoking" restrictions are generally well-posted, this possibility is unlikely to account for much of the discrepancy between the two survey findings. Second, some individuals who ignore smoking restrictions might be unwilling to admit doing so. Some under-reporting no doubt took place in this survey, but there is no way of determining the extent to which smokers who had broken the rules failed to identify themselves.

The higher incidence of sightings (compared to admissions) of smoking policy infractions might simply mean that several or many people could observe the same individual smoking in a restricted area. In addition, the same smokers might be repeatedly ignoring "no smoking" policies. In fact, when asked how often they had smoked in restricted places, ten of these 45 individuals answered "daily or almost daily", seven said "several times a week", and eight admitted to breaking a "no smoking" rule "three or four times a month". Thus, while some smokers may have been less than forthcoming about where they smoke (or unaware that they had broken a "no smoking" rule), these survey results suggest that the fairly frequent observation of smoking policy infractions may be traced to a small minority of smokers.

Table 12 identifies the 60 different restricted locations in which these 45 smokers admitted to having smoked in the previous month. Office buildings and elevators, followed by stores and shopping malls, were mentioned most often. Only seven individuals (less than 2% of all smokers) admitted to having smoked in their workplace, despite a "no smoking" policy, in the previous month. Again, it is possible that some of the other locations identified were also the workplace of the individual mentioning them (e.g. office buildings, hospitals). Nevertheless, Table 12 merely highlights our earlier conclusion that a small minority of smokers appear to be responsible for many or most of the smoking policy infractions observed by the general public.

Reactions to Violations of Smoking Policies

The 1990 Alberta Survey measured reactions to violations of public and workplace "no smoking" policies in several different ways. The most general question was addressed to the 411 survey respondents who had observed "no smoking" violations (in public or workplaces) within the past month. After asking these individuals (one-third of the total sample) where, and how often, this had occurred, interviewers also asked: "how much have you been bothered by this?" One-third (34.1%) of this sub-sample replied that they had not been bothered, while a majority (55.6%) responded that they had been bothered by this "no smoking" policy violation. A full 30% stated that they had been "bothered a great deal".[15]

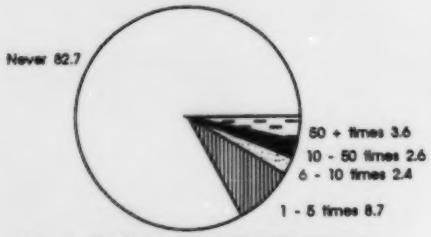
Further analyses (results not shown) revealed no significant differences in responses to this question from survey respondents living in different parts of the province (Edmonton, Calgary, other cities, and the rest of the province). In addition, age, education, and occupation were not significantly associated with reports of being bothered by someone smoking in a restricted place. However, regular smokers were significantly ($p < .01$) less likely than others to say that they were bothered by smoking in restricted places. Their average score (3.35 on the original seven-point response scale) was well below the mid-point of four, compared to 4.93 for occasional smokers, 4.78 for those who had quit smoking, and a high average score of 5.21 for respondents who had never smoked. In short, violations of "no smoking" policies do not appear to upset current smokers but, as one might expect, do bother non-smokers. Women had a significantly higher average score (5.14) compared to men (4.03). To some extent, this would be a result of the relatively fewer women who are regular smokers (see Table 1).

We noted above that 6.4% (and possibly more) of the currently employed had observed someone smoking in a "no smoking" area within their workplace within the previous month. Given this finding, responses to a second question about reactions to smoking policy violations are interesting. This question asked all of the currently employed how often, in the previous year, they had asked someone in their workplace to stop smoking. Almost one in ten (8.7%) had asked someone to "butt out" between one and five times, 5% had asked someone to stop smoking between six and fifty times, and 3.6% (30 of the 806 employed individuals who answered this question) had addressed a smoker in this

15 Respondents answered on a seven-point scale ranging from "not bothered at all" (1) to "bothered a great deal" (7). Scores of 1, 2 and 3 were combined to signify "not bothered", a score of 4 was considered to be "neutral", and 5, 6 and 7 were combined into a "bothered" category.

Figure 8

Requesting Someone at Work
to Stop Smoking, Alberta, 1990



Percent who (in the past year) asked someone
in their workplace to stop smoking

Source: 1990 Alberta Survey (N = 806)

manner fifty or more times in the previous year. Thus, more than four out of five (82.7%) of the employed respondents had never asked someone in their workplace to quit smoking (Figure 8).

These data reveal that, in the past year, the majority (83%) of employed Albertans had not asked someone in their workplace to quit smoking (Figure 8). However, it is also clear that only a small minority had actually observed someone smoking in a "no smoking" area in their workplace in the past month (Table 11). Those who had witnessed such workplace smoking policy infractions were more likely to have asked someone to "butt out" (results not shown).

The different time-frames (last month; last year) make further detailed comparisons of responses to these two questions problematic. Furthermore, the question about asking a co-worker to stop smoking did not enquire whether this had occurred in a "no smoking" area. Nevertheless, these results suggest that those Albertans who do violate workplace "no smoking" policies face a reasonably high chance of a co-worker asking them to stop smoking. A small but apparently active minority appear to regularly ask others in their workplace to stop smoking.[16]

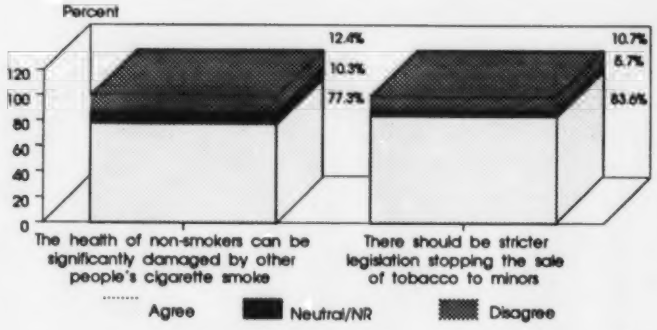
Opinions about Smoking and Smoking Legislation

The 1990 Alberta Survey also included a short set of general opinion statements on smoking-related topics which were asked of all respondents. Over three-quarters (77.3%) of the total sample agreed that "the health of non-smokers can be significantly damaged

16 The 1990 Alberta Survey also asked smokers whether, in the past year, someone in their workplace had asked them to stop smoking. Only a small number (13.3%; n = 41) of the 309 currently employed smokers in the sample answered "yes". Unfortunately, these individuals were not asked whether they had been smoking in a "no smoking" area, and how often someone had asked them to stop smoking.

Figure 9

Opinions about Second-hand Smoke and about Sale of Tobacco to Minors, Alberta, 1990

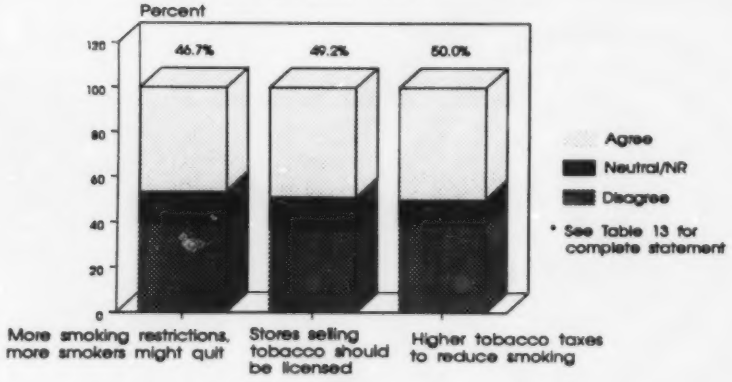


Source: 1990 Alberta Survey

(N = 1245)

Figure 10

Opinions about Restrictions and Taxes on Tobacco Use, Alberta, 1990 *



Source: 1990 Alberta Survey

(N = 1245)

by other people's cigarette smoke",[17] while one-half (49.7%) agreed strongly. Only 12.4% disagreed with this statement. These results clearly demonstrate that a large majority of Albertans believe that second-hand or sidestream smoke can be harmful (Figure 9).

Albertans are even more likely to favour measures that might limit tobacco use by minors. More than four out of five (83.6%) agreed that "there should be stricter legislation stopping the sale of tobacco to minors", with almost two-thirds (65.3%) agreeing strongly. Only 10.7% disagreed with this opinion statement (Figure 9). Since more than a third of the respondents in this study were (regular or occasional) smokers, a sizeable proportion of smokers were themselves in agreement with legislation intended to cut down the use of tobacco by children and youth.

Sample members were somewhat less likely to agree that more restrictions on smoking would cut down on tobacco use, that stores selling tobacco should be licensed, or that taxes on tobacco should be increased to reduce smoking. Nevertheless, roughly half of the sample agreed with each of these opinion statements, while almost 40% disagreed (Figure 10). Thus, recognition of the harmful effects of second-hand smoke and concerns about tobacco use by children and youth appear to be more widespread in Alberta than the belief that a more restrictive approach to tobacco sale and use would be useful.

As one might expect, current smokers were significantly less likely to agree with each of the opinion statements described in Figures 9 and 10. In general, Albertans who had never smoked were most likely to agree, followed by those who had quit and, then, by occasional smokers (Table 13). Considering all five opinion statements, it is clear that regular smokers (who would be directly affected by any increase in cigarette prices) were least likely to agree that taxes should be raised in order to reduce tobacco use. Their average score for this statement (2.65) was well below the neutral mid-point on the seven-point response scale.

At the other end of the opinion scale, Albertans who had never smoked were almost unanimous in their strong agreement with statements about the health dangers of second-hand smoke (an average score of 6.32) and about the need for stronger legislation to limit tobacco sale to minors (an average of 6.25). This group was also fairly receptive to the idea of higher taxes on tobacco products (average = 5.32). But these individuals were somewhat less likely to agree that additional restrictions on smoking would encourage more smokers to quit (average = 4.69), or that stores selling tobacco products should be licensed (average = 4.81).

Table 13 reveals that female and male respondents responded similarly to the idea that additional smoking restrictions might lead more smokers to try to quit. However, women were significantly more likely to agree with the other four opinion statements. Some of these gender differences could simply reflect the fact that relatively fewer women are regular smokers (Table 1). However, the pattern of results displayed in Table 13 is somewhat more complex.

For example, within each category of current smoking behaviour, women were more likely than men to agree that second-hand smoke can be dangerous. This finding corresponds with other research evidence showing a greater concern about health among women

17 respondents answered on a seven-point scale ranging from "strongly disagree" (1) to "strongly agree" (7). Scores of 1, 2, and 3 were combined to signify "disagree", a score of 4 was considered to be "neutral", and 5, 6 and 7 were combined into an "agree" category.

Table 13

Opinions about Smoking and Smoking Restrictions by Sex and Current Smoking Behaviour, Alberta, 1990.

		Average score # Current smoking behaviour				
		Never Smoked	Quit	Occasionally	Every Day	Total
The health of non-smokers can be significantly damaged by other people's cigarette smoke.	Total	6.32	5.95	5.37	4.79*	5.71
	Female	6.41	6.28	5.65	5.06	5.99
	Male	6.19	5.67	4.99	4.58	5.44**
There should be stricter legislation stopping the sale of tobacco to minors.	Total	6.25	6.04	5.87	5.87*	6.06
	Female	6.45	6.29	6.00	5.87	6.2
	Male	5.97	5.83	5.70	5.86	5.88**
If there were more restrictions on smoking, more smokers might try to quit.	Total	4.69	4.17	3.30	3.47*	4.11
	Female	4.68	4.38	3.41	3.31	4.18
	Male	4.70	3.99	3.15	3.60	4.04*
All stores which sell tobacco products should be required to have a special license. **	Total	4.81	4.43	3.94	3.53*	4.28
	Female	5.25	4.82	3.75	3.44	4.60
	Male	4.21	4.10	4.19	3.59	3.97**
Taxes should be increased on tobacco products in order to reduce tobacco consumption. **	Total	5.32	4.55	3.69	2.65*	4.22
	Female	5.56	4.81	4.00	2.54	4.50
	Male	4.99	4.32	3.28	2.73	3.95**
(Approximate N) @	Female	(256)	(163)	(36)	(154)	(609)
	Male	(192)	(193)	(26)	(210)	(621)

Average of responses on a 1 to 7 scale (strongly disagree - strongly agree).

* Differences across current smoking categories are statistically significant ($p < .01$).

** Gender differences are statistically significant ($p < .01$).

@ Sub-sample sizes vary slightly because of different amounts of non-response to the five opinion statements.

Source: 1990 Alberta Survey

than among men (Tagliacozzo and Vaughn, 1980; Small et al., 1980; Albright et al., 1990; Weissfeld et al., 1990). For the statements recommending government intervention (stricter legislation regarding tobacco sales to minors; licensed stores; higher tobacco taxes), women who did not smoke reported a higher average level of agreement compared to non-smoking males. However, the gender difference largely disappeared (or reversed) among regular smokers. Further more detailed studies of public opinion about smoking restrictions would be needed to explain these interaction effects involving gender and current smoking behaviour. Nevertheless, Table 13 shows that, on average, women in Alberta tend to be somewhat more concerned about the health effects of second-hand smoke and somewhat more willing to recommend stricter legislation governing the sale of tobacco.

Further analyses of responses to these five opinion statements revealed no important differences across age categories (results not shown).[18] Sample members living in different parts of the province (Edmonton, Calgary, other cities, towns/villages/rural areas) tended to answer similarly.[19] Better educated sample members were significantly ($p < .01$) more likely to agree that second hand smoke could be dangerous (average scores of 5.51, 5.51, 5.75 and 6.04 across the four educational attainment categories), but education did not appear to affect responses to the other four opinion statements.[20] Occupational differences were not statistically significant, with one exception. Managers and professionals, along with clerical/sales/service workers, were more likely than blue-collar workers to agree that second-hand smoke could be harmful (average scores of 5.87, 5.81 and 5.34, respectively). This difference may simply reflect the heavy over-representation of men (who tend to agree less with this statement) among blue-collar workers.

Thus, the primary sources of variation in response to these statements about health effects of second-hand smoke and about legislative attempts to reduce tobacco use are current smoking behaviour and gender. Better-educated Albertans are also more likely to agree that second-hand smoke can be harmful. But there is no evidence that rural residents have significantly different opinions about smoking and about restrictions on the sale and use of tobacco.

Reasons for Quitting Smoking

One final set of questions included in the 1990 Alberta Survey are of interest. All sample members who smoked were asked how important five different reasons might be in influencing them to quit smoking. Previous smokers were asked to evaluate the importance of the same five reasons with respect to their decision to quit smoking. Such information might be helpful in

18 The relationship between age and responses to the question about second-hand smoke was statistically significant. However, the average scores for the four age groups (youngest to oldest: 5.92; 5.78; 5.45; 5.71) did not fit into any easily interpretable pattern.

19 The relationship between location and answers to the second-hand smoke statement was statistically significant, but differences across the four locations were not really substantively different (Edmonton = 5.68; Calgary = 5.70; other cities = 6.09; towns/villages/rural areas = 5.59).

20 While not substantively different, the differences across education categories (lowest to highest: 6.03, 6.21, 6.17, 5.79) in response to the question about sale of tobacco to minors were significant (p .01), and puzzling. It is not immediately clear why the most highly educated respondents would be least likely to agree with this statement.

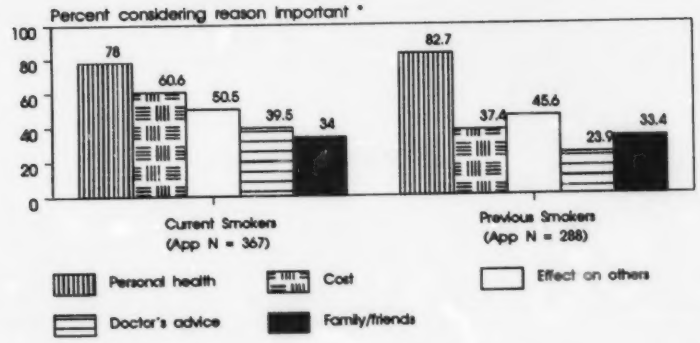
designing and implementing workplace "no smoking" policies. The following discussion focusses on responses to these questions from (current and past) regular cigarette smokers, but ignores the small number of (past and present) occasional smokers in the sample.

One would expect a higher proportion of previous (compared to present) smokers to acknowledge that "concern for what [smoking] was doing or could do to your health in the future" was an important reason for quitting smoking.[21] This difference is observed in this study (Figure 11), although it is also clear that a large majority of both present (78%) and past smokers (82.7%) see personal health concerns as an important reason. However, the two groups differed in how they assessed "the cost of cigarettes" as a contributing factor. Only 37.4% of those who had quit smoking acknowledged that the cost of cigarettes had been an important reason, while 60.6% of present smokers felt that this could be an important reason for their own decision to quit. The difference probably reflects the much higher cost of cigarettes today, compared to an earlier era when tobacco taxes were relatively less.

Somewhat more current smokers, compared to those who had quit, acknowledged that "the effect [their] smoking had on others" had been or could be an important reason for quitting (50.5% and 45.6%, respectively). While this difference is not large, it may reflect a somewhat greater sensitivity to the rights of non-smokers among today's smokers. "Pressure from family, children or friends" was identified as an important reason for quitting by one-third of those in both groups, but "advice from your doctor"

Figure 11

Reasons for Quitting Smoking,
Current and Previous (regular) Smokers,
Alberta, 1990



Source: 1990 Alberta Survey

* Scores of 5, 6 or 7 on 1-7 scale
(not at all important - very important)

21 Respondents answered on a seven-point scale with the end-points labelled "not at all important" (1) and "very important" (7). Scores of 5, 6 and 7 are combined into an "important reason" category.

both groups, but "advice from your doctor" was rated as an important reason much more often by current smokers (39.5%) than by those who had quit (23.9%). There are a number of possible explanations for this difference, but further information on the frequency of such medical advice would be needed to choose among them.[22]

If one were designing programs to encourage current smokers to quit, the results displayed in Figure 11 would be of obvious relevance. Such programs should place the most emphasis on health costs, but could effectively include some emphasis on monetary costs and on the effect of smoking on others. If one's goal is to implement and sell a workplace "no smoking" policy, the implications of these findings are not quite as clear. It is apparent that only one-half of current smokers admit that the effect of their smoking on others would be an important reason for quitting, compared to over three-quarters who see their own health as an important factor. But this does not mean that one-half of current smokers would object to not smoking around others, since the question asked about reasons for quitting smoking.

Nevertheless, these results imply that smokers will be more motivated to alter their behaviour by concerns about their own health. If we acknowledge that not smoking at work essentially means quitting smoking in a location where one previously smoked, these findings may have some significance. When promoting a "no smoking" policy, there might be merit in putting additional emphasis on the personal health benefits to smokers of not smoking for a portion of the day when they previously smoked (even if they don't quit completely). Similarly, smokers might be more receptive to the implementation of such a policy if they were reminded that they were saving money. Equally important, there is obviously a need for continued reinforcement of the fact that second-hand smoke can be harmful to others. As noted in Table 13, current smokers are significantly less likely than those who have quit or never smoked to agree that this is the case.

Table 14 displays average responses of female and male current and previous smokers to these five different reasons for quitting. The gender differences are small and non-significant, with one exception. For both present and past smokers, women are more likely to be concerned about the effect of their smoking on others around them. The implications of this relationship for the implementation of workplace "no smoking" policies are somewhat more obvious. The rationale for such policies has typically been that they will protect the rights of non-smokers to a smoke-free work environment. These results imply that such policies will be met with less resistance in workplaces with a larger proportion of female employees. Alternatively, the greater the proportion of male employees in a workplace, the more emphasis one would have to place on convincing employees of the health hazards of second-hand smoke.

Age differences in responses (of current smokers only) to these five reasons for quitting are shown in Table 15. The four age groups are equally likely to say that advice from their doctor would be an important motivation to quit smoking. However, there are very large differences by age in response to the other four reasons. To a considerable extent, they reflect the very different pattern

22 Not all those who admit that a doctor's advice might motivate them will actually quit. Hence, the proportion of previous smokers saying this was an important reason should be lower than the proportion of current smokers saying this is an important reason. Alternatively, doctors today may be more willing to warn their patients about the health risks of continuing smoking.

Table 14

Reasons (of Current and Past Regular Smokers) for Quitting Smoking by Sex, Alberta, 1990.

	Average score #					
	Current smoker			*Previous smoker*		
	Female	Male	Total	Female	Male	Total
Concern for what it was doing or could do to your health in the future.	5.67	5.54	5.60	6.17	5.74	5.93
The cost of cigarettes.	5.03	4.86	4.93	3.93	3.51	3.69
The effect your smoking had on others.	4.77	*	4.14	4.41	4.72*	3.69
Advice from your doctor.	4.00	3.71	3.84	2.96	2.41	2.64
Pressure from your family, children, or friends.	3.74	3.32	3.50	3.57	3.04	3.27
(Approximate N) @	(157)	(210)	(367)	(124)	(164)	(288)

#Average of responses on a 1 to 7 scale (not at all important - very important); current and past regular (daily) smokers only.

* Gender differences are statistically significant (p .01).

@ Sub-sample sizes vary slightly because of different amounts of non-response to the five reasons for quitting smoking.

Source: 1990 Alberta Survey

of responses provided by (the small number of) senior citizens who smoke. In general, seniors placed much less emphasis on any of these four reasons than did their younger counterparts, implying, perhaps, that little would now change their smoking behaviour.

Since a central focus of this report is on reactions to workplace smoking policies, the additional age differences among those of working age (18 to 64) should also be examined. The reason for quitting which is of most immediate significance is "the effect your smoking had on others". Table 15 reveals that smokers aged 25 to 44 are most likely to state that this is an important reason. While the explanation for this pattern is not immediately clear, these results suggest that a workplace "no smoking" policy would be met with less resistance in work

Table 15

Reasons (of Surrent Smokers) for Quitting Smoking by Age, Alberta, 1990.

	Average score # Age				
	18-24	25-44	45-64	65+	Total
Concern for what it was * doing or could do to your health in the future.	5.14	5.90	5.60	3.05*	5.60
The cost of cigarettes.	4.97	4.98	5.10	3.33*	4.93
The effect your smoking had on others.	3.93	4.80	4.00	2.93*	4.41
Advice from your doctor.	3.93	3.85	3.79	3.73	3.84
Pressure from your family, children, or friends.	2.73	3.77	3.40	2.82*	3.50
(ApproximateN) @	(48)	(217)	(86)	(17)	(368)

Average of responses on a 1 to 7 scale (not at all important - very important); current (daily) smokers only.

* Age differences are statistically significant ($p < 01$).

@ See Table 14

Source: 1990 Alberta Survey

organizations with relatively fewer very young workers.[23]

Table 15 also reveals that the youngest smokers in the sample (those aged 18 to 24) were somewhat less concerned about personal health effects of smoking, compared to those aged 25 to 64. They were also considerably less likely to say that pressure from family and friends would be an important reason for quitting. Both of these findings make intuitive sense: younger smokers would, presumably, still be healthier and might be less influenced by the concerns of family, friends and, particularly, children.

More educated current smokers were significantly more likely to say that concerns about their health would constitute an important reason for quitting smoking, but less likely to consider the cost of cigarettes to be an important reason (Table 16). These findings are not difficult to interpret. One would expect better educated individuals to

23 Less concern by younger smokers about the effect of smoking on others might be attributed to a lack of maturity. The lower level of importance attached to this statement by older (45 to 64) smokers may simply reflect the fact that, in this age group, males are considerably more likely to be regular smokers (see Table 1 and Figure 1). As shown in Table 13, men are significantly less likely to say that effects of their smoking on others would be an important reason for quitting.

be more conscious of the health consequences of smoking. And, on average, those with higher education would have higher incomes. Hence, the high cost of smoking would be relatively less problematic for them. However, educational attainment was not significantly related to the importance current smokers attached to the other three reasons for quitting smoking. Further analyses examining the relationship between occupation and responses to these five questions about reasons for quitting smoking identified only one statistically significant ($p < .01$) relationship: managers and professionals were least likely to identify the cost of cigarettes as an important reason. The explanation for this finding is the same as that proposed for educational attainment. On average, managers and professionals can better afford to smoke.

Analysis of differences across location (Edmonton, Calgary, other cities, towns/villages/rural) in responses to these five questions about reasons for quitting smoking revealed only one statistically significant difference (results not shown). Currently smoking residents of Edmonton and Calgary were less likely to state that the cost of cigarettes would be an important reason for quitting, compared to smokers living in other cities and in towns, villages

Table 16

Reasons (of Current Smokers) for Quitting Smoking by Education, Alberta, 1990.

	Average score # Yrs. of completed education				
	<12	12	13-15	16+	Total
Concern for what it was doing or could do to your health in the future.	5.14	5.60	5.86	6.08	5.60
The cost of cigarettes.	5.44	5.08	4.57	4.26	4.93
The effect your smoking had on others.	4.03	4.73	4.34	4.96	4.41
Advice from your doctor.	3.70	3.78	3.88	4.27	3.84
Pressure from your family, children, or friends.	3.45	3.52	3.46	3.74	3.50
(Approximate N) @	(110)	(96)	(122)	(39)	(368)

See Table 15.

* Education differences are statistically significant (p .01).

@ See Table 14

Source: 1990 Alberta Survey

and rural areas (average scores of 4.56, 4.68, 5.0, and 5.41, respectively). This difference may simply mean that residents of Edmonton and Calgary tend to have higher incomes, which would make increases in cigarette prices relatively less problematic.

However, it is important to note that, compared to Calgary and Edmonton smokers, those living outside of the two major metropolitan areas were equally likely to state that the effect of their smoking on others would be an important reason to quit. Hence, as implied earlier in the discussion of opinions about the health hazards of second-hand smoke, there is no evidence in this study that smokers in rural areas would be more resistant to public or workplace "no smoking" policies.

Summary and Conclusions

In the past decade, a continuing decline in the proportion of Canadians who smoke has been accompanied by growing support for restrictions on smoking in public and workplaces. This report adds to the research literature documenting these trends in several ways. It begins by providing up-to-date and detailed information on smoking behaviour in Alberta. It then describes the extent to which Alberta workers are today protected by some kind of workplace "no smoking" policy. Both behavioural and attitudinal responses to such policies are examined. In addition, the report considers Albertans' general attitudes towards smoking and legislation limiting smoking, and comments on the reasons which current smokers give for (potentially) quitting smoking. For each of these questions, differences across population sub-groups (age, gender, education, and occupation) are explored. Of particular interest are urban-rural differences, since previous research has not addressed the question of whether "no smoking" policies could be implemented as easily in rural and small town settings as in larger urban centres.

This 1990 province-wide survey reveals that less than one-third (29.6%) of adult Albertans are regular cigarette smokers. This proportion is little different from that observed in other national studies conducted in the mid-1980s. Differences in smoking behaviour by age, sex, education, and occupation are also generally similar to those reported in previous studies. Men are somewhat more likely than women to smoke, and older Albertans, particularly senior citizens, are less likely to be daily cigarette smokers. More detailed analyses also highlight a higher proportion of regular cigarette smokers among young males living outside of the two major urban centres (Edmonton and Calgary). Higher educational attainment is associated with a lower probability of smoking. The proportion of smokers is highest among those reporting blue-collar occupations and lowest in the managerial and professional occupational category.

This study shows that almost two-thirds of employed Albertans (64.4%) are protected by some kind of smoking policy, including one-quarter who work in an organization where smoking is completely banned. Over half (57.5%) report that smoking is not permitted in their immediate work area. Assuming that Alberta is reasonably representative of the country as a whole,[24] these 1990 survey results suggest considerable movement in the last few years towards broader coverage of Canadian workers by workplace smoking policies. The 1986 Labour Force Survey revealed only 40% of Canadian workers covered by some kind of workplace smoking policy, and 53% stating that smoking was allowed in their immediate work area (Millar and Bisch, 1989). The 1985 Canadian Health Promotion

24 It is unlikely that Alberta is ahead of the national trend in implementation of workplace smoking policies. If anything, one might expect the larger private and public sector employers in central Canada to have moved further in this direction.

Survey (Health and Welfare Canada, 1988:19) found less than 10% of employed Canadians working in a setting where smoking had been totally banned.

Women are more likely than men to be working in settings where smoking is banned or restricted, and older workers have a higher probability of being protected by a workplace smoking restriction. Young male workers are least likely to be employed in an organization with some kind of "no smoking" policy, primarily because young men are over-represented in the blue-collar occupations where smoking policies are least likely to have been implemented.

Urban-rural comparisons demonstrate that workplaces in towns, villages, and rural areas are less likely to have some form of "no smoking" policy. Within the urban centres in Alberta, Edmonton appears to have moved furthest towards eliminating smoking in the workplace, perhaps because of the larger number of government offices in that city. However, Calgary and other Alberta cities are not that far behind in this trend towards smoke-free workplaces.

Almost four out of five (78.9%) of the employed Albertans who reported some kind of smoking policy in their workplace stated that they agreed with this policy. This proportion is similar to the results of several mid-1980s studies enquiring about restrictions on smoking in the workplace (Gallup, 1985; Biscott, 1987; Millar and Bisch, 1989). The difference, as already noted, is that a much larger proportion of the employed respondents in this 1990 Alberta study were affected by such a policy. Furthermore, the earlier studies tended to show both smokers and non-smokers favouring restricted smoking areas over total bans. This 1990 study reveals that non-smokers evaluate total bans more positively. The conclusion would appear to be that as workplace smoking policies become more common, support for them has remained consistently high. We may also have seen a shift towards more support for outright smoking bans in the workplace.

Previous research has shown males to be less supportive of workplace smoking policies, but this study failed to identify a significant gender difference in agreement with policies already in place. However, like other studies, this 1990 Alberta study showed current smokers, and the less educated, to be less supportive. Nevertheless, as reported in the research literature, even among smokers there is considerable agreement with workplace smoking policies, although this is less the case for complete bans than for restricted smoking policies. Of particular interest is the finding that, despite the somewhat higher proportion of smokers and the relatively fewer work settings with smoking policies in place, Albertans living outside of the major urban centres were no less likely to state that they agreed with a "no smoking" policy, if one existed in their workplace.

Attitudinal responses to a public or a workplace smoking policy provide us with one assessment of how such policies are being received. Behavioural responses, that is, violations of such policies, give us another perspective. The 1990 Alberta Survey went beyond most other studies by enquiring about such behavioural responses and, in turn, about the reactions of those who had observed someone ignoring a "no smoking" policy.

One-third of the total sample reported observing someone smoking in a restricted area during the previous month. Edmonton and Calgary residents were more likely to have seen such smoking policy infractions, no doubt because more smoking restrictions have been put in place in these larger urban centres. Over half of those who had witnessed someone ignoring a "no smoking" rule reported that this had occurred more than once or twice in the previous month. These smoking policy infractions were observed in a wide range of locations,

including restaurants, stores, office buildings, public transporation settings, malls, and workplaces.

Given the way the questions were asked, we cannot easily determine whether smoking policy violations are more or less frequent in workplaces than in other public places. However, these survey results do suggest that violations of "no smoking" policies are observed fairly often by the general public, and that workplace smoking policy violations are not isolated events. Sample members who smoked were asked whether they had personally smoked in a restricted area in the previous month. Only 45 of the 430 smokers (10.5%) admitted to doing so. While this low number may indicate some under-reporting, these findings suggest that the relatively frequent observations of smoking policy infractions may be traced to a small minority of smokers.[25]

Over half (55.6%) of the sample members who had observed smoking policy violations reported that they had been bothered by the smoker's behaviour. Regular smokers were less likely to state that they had been bothered by someone else's smoking in a restricted area, while women were more likely than men to agree that they had been bothered. The latter finding reflects the former, since a lower proportion of women are regular smokers. However, age, education, occupation, and urban-rural residence were not associated with responses to this question. Again, the fact that rural and urban residents were equally likely to be bothered by someone smoking in a restricted area is of significance. In short, these survey results do not indicate greater opposition to workplace smoking policies, or more tolerance of smoking in restricted areas, among rural and small-town residents of the province.

All employed sample members were also asked whether, in the past year, they had asked someone in their workplace to stop smoking. Four out of five (82.7%) said "no", but 8.7% had responded to a smoker in this way between one and five times. A similar proportion had asked a co-worker to "butt out" more than five times in the previous year. It is apparent that a small but vocal minority of workers frequently ask the small minority of smokers who do violate workplace "no smoking" policies to stop smoking.

Responses to a more general set of opinion statements reveal that a large majority (77.3%) of Albertans believe that second-hand smoke can be harmful. An even larger majority (83.6%) would favour stricter legislation restricting the sale of tobacco to minors. However, only half of the sample agreed that more restrictions on smoking would reduce tobacco use, that stores selling tobacco should be licensed, and that tobacco taxes should be raised to cut down on smoking. As one might expect, current smokers were less likely to agree with each of these five statements. Women, and the better educated, were more likely to agree that second-hand smoke could be dangerous. Urban-rural differences were basically unimportant, suggesting once again that rural and small-town residents of the province are little different from their urban counterparts in attitudes towards smoking and smoking restrictions.

It is apparent that the message about the health risks of second-hand smoke is getting through to the general population, and even to smokers themselves. It is also very clear

25 Further research on this topic would be useful. If these findings were replicated, they might be of value in educational campaigns designed to encourage compliance with "no smoking" policies (e.g. Nine out of ten smokers respect the rights of non-smokers. Are you one of them?).

that Albertans would welcome stronger legislation designed to reduce the sale of tobacco to minors. While the public is divided about restricting the sale of tobacco to adults, legislators would probably be applauded, rather than criticized, for introducing tougher laws regarding tobacco sale to children and youth.

There are a number of reasons why the public may be more divided regarding other legislative attempts to reduce tobacco consumption. Many people (smokers and non-smokers alike) might be skeptical about whether such attempts would really encourage people to quit smoking. Some individuals might be reluctant to advocate further government intervention in the everyday lives of people (e.g., requiring that tobacco shops be licensed). Smokers would be expected to oppose further tax increases on cigarettes. Nevertheless, it is important to remember that a divided public does not necessarily mean that such attempts to reduce tobacco consumption would be ineffective.

While the majority of Albertans affected by workplace "no smoking" policies were generally in agreement with them, and while four out of five of all adults in the province (including smokers) accepted that second-hand smoke can be harmful, it is still quite likely that the introduction of a new smoking policy in a workplace might be met with some resistance. Consequently, answers to a final set of questions about possible reasons for quitting smoking were also analyzed. The pattern of responses might be of assistance in designing and implementing workplace "no smoking" policies.

Personal health concerns were most likely to be seen as an important reason for quitting smoking, by both former (82.7%) and present (78%) smokers. Present smokers were much more likely than those who had quit to say that the cost of cigarettes was/would be an important reason (60.6% compared to 37.4%). About one-half (50.5%) of the current smokers and 45.6% of those who had quit indicated that the effect of their smoking on others would be/had been an important reason for quitting.

Even though most smokers realize that second-hand smoke can be harmful, and while a majority do not object to workplace smoking policies, these results show that smokers are more motivated to quit by concerns about their own health than by concerns about the effects of their smoking on others. Hence, when promoting a new workplace smoking policy to smokers, it might be helpful to put additional emphasis on the personal health benefits of smoking less. Similarly, smokers might be more receptive to such a policy if they were reminded of the money they might save.

Women who smoke are somewhat more likely than male smokers to say that the effects of their smoking on others would be an important reason for quitting. This implies that new workplace smoking policies would be met with less resistance in organizations with a larger proportion of female workers.[26] Age differences in response to this and other questions about reasons for quitting smoking suggest that the introduction of a workplace "no smoking" policy might be somewhat more difficult in settings with many younger workers. Finally, rural and urban smokers were equally likely to state that the effect of their smoking on others would be an important reason for quitting. As noted above, there is no

26 Since women are less likely to smoke, there would also be fewer smokers in such organizations who might oppose a "no smoking" policy.

evidence that workplace smoking policies would be more difficult to implement in rural and small-town settings.

This report summarizes findings from a large, recent, random-sample survey of Alberta adults, and allows us to confidently generalize to the Alberta population. We have also suggested that Alberta findings may have some applicability to the rest of the country. Scanning the large number of research findings summarized above, there appear to be four basic conclusions one can draw from this study:

1. *Workplace smoking policies have become much more common, with a substantial majority of workers protected by some type of policy.*

2. *As workplace smoking policies have become more common, the strong support for them which was observed in earlier studies has remained. While smokers are somewhat less likely to support such policies, a majority do agree with them. In addition, a large majority (including smokers) acknowledge that second-hand smoke can be harmful. Thus, in general, the principle that the rights of non-smokers must be protected appears to have become the norm.*

3. *A small minority of workers continue to violate "no smoking" policies, but they face a reasonably high chance of being asked to comply by another small minority of co-workers.*

4. *Although residents of larger urban centres are somewhat less likely to smoke, and while workplace smoking policies are somewhat less common in rural and small town settings, rural and urban residents (including smokers) appear to be equally receptive to "no smoking" policies. Consequently, any concerns about introducing such policies in non-urban settings should be downplayed.*

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Here Are Some Questions On Smoking.

4. a) Have you **ever** smoked cigarettes?

yes ..... 1 **(ASK b)**

no ..... 2 **(GO TO 11)**

b) How old were you when you started smoking cigarettes *(beyond experimentation)?*

_____ years old

c) At the present time, do you smoke cigarettes **every day, occasionally** *(not every day)*, or have you **stopped** smoking?

every day ..... 1 **(GO TO 6)**

occasionally ..... 2 **(GO TO 7a)**

stopped ..... 3 **(ASK 5a)**

5. a) When you smoked cigarettes did you smoke **every day** or **occasionally**?

every day ..... 1 **(ASK b)**

occasionally ..... 2 **(GO TO c)**

b) On average, how many cigarettes did you smoke per day?

_____ cigarettes per day

c) How long ago did you quit smoking?

_____ years----------**>(GO TO 10)**

_____ months----------**>(GO TO 10)**

_____ weeks----------**>(GO TO 10)**

_____ days----------**>(GO TO 10)**

6. **ASK ALL WHO PRESENTLY SMOKE.**

On average, how many cigarettes do you usually smoke per day?

_____ cigarettes per day

7. a) In the last month, have you smoked in any places or areas that **did not permit** smoking?

yes ..... 1 **(ASK b)**

no ..... 2 **(GO TO 8a)**

b) Where were these places?

(PROBE) Anywhere else?

1. _____

2. _____

3. _____

4. _____

5. _____ _____

c) How often did you do this? Would it have been **daily or almost daily, several times a week, 3** or **4 times in the month** or just **once or twice** in the month?

daily or almost daily 1

several times a week 2

3 or 4 times in the month 3

once or twice in the month 4

don't remember *(volunteered)* 8

8. a) Have you ever tried to **quit** or seriously **cut down** on smoking?

yes ..... 1 **(ASK b)**

no ..... 2 **(GO TO 9)**

b) Did you actually stop for a period of time *(at least 24 hours)?*

yes ..... 1 **(ASK c)**

no ..... 2 **(GO TO 9)**

c) How many times have you tried to quit?

_____ times

d) Just thinking of the last time, how long did you stay off?

_____ years

_____ months

_____ weeks

_____ days

9. In the last year, has a doctor advised you to quit smoking?

yes 1

no 2

10. ASK ALL WHO SMOKE OR DID SMOKE.

I am going to read to you a list of reasons people sometimes give for quitting smoking.

For these items please respond in accordance with a scale where "**1**" is **Not At All Important** and "**7**" is **Very Important**. If you feel that your response is between **Not At All Important** and **Very Important** you would put yourself somewhere from "**2**" to "**6**". For example, "**4**" means that you feel it is just as **important** as it is **not important**.

Now please tell me how **important** or **unimportant** each item *(would be/was)* to you as a reason for quitting smoking.

a) The cost of cigarettes.

Not At All Important						**Very Important**	**DK**
1	2	3	4	5	6	7	8

b) Concern for what it **was** doing or **could** do to your health in the future.

Not At All Important						**Very Important**	**DK**
1	2	3	4	5	6	7	8

c) The effect your smoking had on others.

Not At All Important						**Very Important**	**DK**
1	2	3	4	5	6	7	8

d) Pressure from your family, children or friends.

Not At All Important						**Very Important**	**DK**
1	2	3	4	5	6	7	8

e) Advice from your doctor.

Not At All Important						**Very Important**	**DK**
1	2	3	4	5	6	7	8

11. ASK ALL

For this next question on smoking I need to ask if you are presently working full-time, part-time, going to school, retired, keeping house or something else?

(IF MORE THAN ONE CATEGORY IS APPLICABLE RECORD THE SMALLEST CODE.)

employed full-time ..... 1 **(ASK b)**

employed part-time ..... 2 **(ASK b)**

unemployed ..... 3 **(GO TO 16)**

retired ..... 4 **(GO TO 16)**

in school ..... 5 **(GO TO 16)**

keeping house ..... 6 **(GO TO 16)**

other (specify) ..... 7 **(GO TO 16)**

12. ASK IF WORKING & SMOKING OTHERWISE GO TO 13.

a) Is smoking permitted in your **immediate** work area (where you spend most of your time)?

yes 1

no 2

b) In the past year, has anyone at your workplace ever asked you to stop smoking?

yes ..... 1 **(ASK 13)**

no ..... 2 **(ASK 13)**

work at home by myself ..... 3 **(GO TO 15b)**

work alone in vehicle ..... 4 **(GO TO 15b)**

13. ASK IF WORKING (whether smoking or not).

In the last year, at your place of work, how many times **have you asked** anyone to stop smoking?

_____ times

14. a) At your place of work, is there a "no smoking policy"?

yes ..... 1 **(ASK b)**

no ..... 2 **(GO TO 15a)**

b) Is it a policy which allows **no smoking at all**, or is it a policy which allows **smoking only in certain places**?

policy allowing no smoking 1

policy allowing smoking only in certain places 2

c) For this next question, please respond in accordance with a scale where "**1**" is **Strongly Disagree** and "**7**" is **Strongly Agree**.

*If you feel that your response is between **Strongly Disagree** and **Strongly Agree** you would put yourself somewhere from "**2**" to "**6**". For example, "**4**" means that you are just as much in agreement as you are in disagreement.*

How strongly do you **agree** or **disagree** with this "no smoking policy"?

Strongly Disagree						**Strongly Agree**	**DK**
1	2	3	4	5	6	7	8

15. a) **About** how many people in your **immediate** work area are smokers?

_____ people

b) Away from work, **about** how many people you interact with on a **regular basis** are smokers?

_____ people

16. ASK ALL

a) In the last month, have you noticed people smoking in any places or areas that **did not permit** smoking?

yes ..... 1 **(ASK b)**

no ..... 2 **(GO TO 17)**

b) Where were these places?

(PROBE) Anywhere else?

1. _____

2. _____

3. _____

4. _____

5. _____

c) How often have you noticed this? Would it have been **daily or almost daily, several times a week, 3 or 4 times in the month** or just **once or twice** in the month?

daily or almost daily 1

several times a week 2

3 or 4 times in the month 3

once or twice in the month 4

don't remember (volunteered) 8

d) How much have you been bothered by this (people smoking where it is not permitted)?

Please respond in accordance with a scale where "1" is **Not Bothered At All** and "7" is **Bothered A Great Deal**.

*If you feel that your response is between **Not Bothered At All** and **Bothered A Great Deal** you would put yourself somewhere from "2" to "6". For example, "4" means that you are just as much **bothered** as you are **not bothered**.*

Not Bothered At All						**Bothered A Great Deal**	**DK**
1	2	3	4	5	6	7	8

17. For these next items please respond in accordance with a scale where "1" is **Strongly Disagree** and "7" is **Strongly Agree**.

*If you feel that your response is between **Strongly Disagree** and **Strongly Agree** you would put yourself somewhere from "2" to "6". For example, "4" means that you are just as much in agreement as you are in disagreement.*

How much do you **agree** or **disagree** that:

a) If there were more restrictions on smoking, more smokers might try to quit.

Strongly Disagree						**Strongly Agree**	**DK**
1	2	3	4	5	6	7	8

b) The health of non-smokers can be **significantly** damaged by other people's cigarette smoke.

Strongly Disagree						**Strongly Agree**	**DK**
1	2	3	4	5	6	7	8

c) There should be **stricter** legislation stopping the sale of tobacco to minors.

Strongly Disagree						**Strongly Agree**	**DK**
1	2	3	4	5	6	7	8

d) All stores which sell tobacco products should be required to have a special license.

Strongly Disagree						Strongly Agree	DK
1	2	3	4	5	6	7	8

e) Taxes should be increased on tobacco products in order to **reduce** tobacco consumption.

Strongly Disagree						Strongly Agree	DK
1	2	3	4	5	6	7	8